

47.182

A
TREATISE
ON M^sSynnot.
AGRICULTURE,
INTITLED THE
YORKSHIRE FARMER.
In TWO PARTS.

This TREATISE explains and exemplifies in a simple and demonstrative Manner, the several useful Methods of HUSBANDRY, and of Reclaiming BOG and MOUNTAIN.

ALSO

A MONTHLY CALENDAR of WORKS to be done, as they come in Season throughout the Year.

WITH

Several Cuts of MACHINES, and TOOLS, &c.

LIKEWISE

Here is humbly offered to the LEGISLATURE, and Friends of IRELAND, a SCHEME for maintaining the POOR thereof.

By CHARLES VARLEY.

D U B L I N.

[C. Varley.]

Printed for the Author, by ALEX. M'CULLOH, in
Henry-street, 1765.

A
TREATISE
ON THE
AGRICULTURE
OF THE
YORKSHIRE FARMER.
IN TWO PARTS.

The TREATISE explains and exemplifies in
a simple and demonstrative Manner, the several
most approved Methods of HUSBANDRY, and of
Raising SOG and MOUNTAIN.

ALSO
A MONTHLY CALENDAR of WORKS
to be done, as they come in Season throughout the
Year.

WITH
Several Lists of MACHINES, and TOOLS, &c.
Likewise
There is likewise added to the LEGISLATURE,
and Records of PARLIAMENTS, a Scheme for
improving the Poor.

BY GEORGE YARBROOK.
DUBLIN: J. W. ...



Printed for the Author, by James McCollon, in
Thames Street, 1775.





INTRODUCTION.

AS my design is to make this small Treatise as comprehensive and plain as possible, to the capacity of my farming readers, I humbly conceive, that the best way is not to over-burthen their memory with long and tedious paragraphs; or to perplex them with a confusion of subjects and ideas; or to divert their attention, from any main or material point, by unnecessary digressions.

In short my intention is to instruct, and by no means to amuse my readers. The work is calculated for the apprehension of the simple and unlearned. To be useful to them, I must be as plain and intelligible as my subject will admit. And I have further endeavoured to digest and comprize the

ii INTRODUCTION.

whole in as small a compass as possible, that it may attend on my readers as a pocket-companion, a useful and ready monitor, and an instructive and constant friend.

For the foregoing good purposes, I have divided this work into two branches. The first comprehends and specifies the respective receipts and instructions that pertain to the several departments in farming. The second branch is composed of remarks, explanations, and illustrations on the first, with such suitable references to the subject and page, as may serve to clear any difficulty or doubt in the reader.

As different countries have different names, whereby they express the same species of implements and methods in husbandry; and a knowledge of terms is indispensably necessary to the knowledge of every art; I have inserted a list of such requisite or doubtful terms in the 226 page, to which I refer the reader.

What



INTRODUCTION. iii

What I have here presumed to offer to the public, is quite foreign from matters of genius and speculation. It is merely a compendium and abstract of matters of fact, of personal experiments and observations through a series and application of three and twenty years continuance. I have borrowed nothing from books, neither from the precarious information of others. All stands on the ground and proof of my own repeated trials, remarks, and deductions, throughout the kingdoms of England, Scotland, Wales, and Ireland; in each of which kingdoms I have repeatedly laboured for a number of years, and here deliver to you the product of all that I have gleaned, with the varying allowances and respective instructions, touching the difference of the climate, the culture, and the soil.

As the utmost of my ambition is, simply and clearly to convey my thoughts and meaning to persons of vulgar and mean capacities; should men of improved genius, of letters and precision, happen

iv INTRODUCTION.

happen to dip into this business, I trust that, while they look down upon an author so much beneath them, they will have the goodness to pardon the defects of a writer whose only aim and endeavour is, to be understood. But if here and there, they should find any thing deserving of their inspection or more particular attention; if they should find some grains of wheat in the midst of my chaff, or smaller parcels of gold in the mass of my dirt; the honour of having contributed, in any measure, to their advantage, will be to me a high matter of payment and gratification.

The instructions and directions, contained in the first book, especially respecting times and seasons, are more particularly calculated for the wet-weather climates, such as Ireland, and the Northern parts of England, &c.

In the second book I have set forth a calendar of memorandums, so that my reader, (by turning to the particular

INTRODUCTION. v

particular month) may be reminded of the work he ought to take in hand.

Therein I have also added a table of different kinds of grain; and the quantity for each acre, both in the drill and broad-cast husbandry.

In the same book will appear a cut of a machine which I invented to harrow and clear meadow and pasture-ground from moss; and also to harrow, sow, and roll corn with one man and two horses at one time; with other cuts for dressing flax, winnowing corn, &c.

In the first book I have treated the more largely and accurately on hemp and flax, as they are the constituent materials of the LINEN-STAPLE, the foundation whereon the many consequent crafts, manufactures and advantages to these kingdoms arise. The seed is previously necessary to the growth of the material, and the material is equally necessary to the several degrees of the various operations that are built thereon. Should any nation or any man be ever so ingenious, and yet

vi INTRODUCTION.

yet want the subject matter whereon to exercise their ingenuity, they would be as a person proposing to take possession of a great estate, but who was seized at the setting out, with a dead palsy.

How happy might the inhabitants of Ireland think themselves, could they once see the time that they could supply themselves with flax and seed sufficient for their own consumption; and on the other hand, who can without concern see the present insurmountable barriers to the flourishing of this branch, namely the high price of flax and seed; the latter sells in the country from five to six shillings per peck; is not this alone sufficient to deter a farmer from sowing any large quantity? when the seed for an acre will cost about three pounds twelve shillings.

The consequence of all this is not unknown to the honourable gentlemen in trust for that branch, and it is plain how much they have the interest of their country at heart from the many encouragements given upon any plausible

INTRODUCTION. vii

ible scheme or propofal for removing this principal obftacle to the prosperity of Ireland.

With refpect to the Dutch invention of dressing flax by water-mills, their pernicious effects in fpoiling the flax by breaking the harle or fkin, and making tow of it, have been fo frequently experienced, that thofe mills are now held in general difefteem, and are in a great meafure laid afide. It is well known to the hacklers, that the beft flax is that which has a clear open harle, that is, the fkin hanging as it were in ribbands, clear from the tow, and knots; flax in this ftate will fplit or divide into fine long threads, and both be better in quality, and yield more tear than that which is beat into a matrafs of tow, by the irregularity of a mill. The hacklers of England are fenfible of this, as they will give eight or ten per cent more for fome men's dressing than others, tho' they be clean from fhoves and of the fame flax; but indeed it is not to be wondered at, as reafon will

viii INTRODUCTION.

tell us, the more the harle is broke and drawn to knots, by an unskilful hand, the more of it will go into tow and waste.

A person who would give his opinion of the product of any country, or what perfection it has arrived to in the commodity it produces, must form a judgment, by duly considering what state that country is in; whether the necessaries of life be cheap or dear; if they are high, he may reasonably think that labour is high also; but if said country can afford their products lower than their neighbours, it is a sure sign that they pursue a better plan of management.

The consumers of any commodity will doubtless find out the cheapest market for laying in their materials.

Manchester, Stockport, Chester, and Liverpool, manufacture a great deal of flax, and tho' they can have foreign flax laid down at their doors, and six or twelve months credit; yet, they had rather go to the markets and fairs in
York-

INTRODUCTION. ix

Yorkshire and Lincolnshire, and pay a heavy land-carriage, and ready money for English flax, than have the former.

Stockport is a noted place for checks, and I have often heard the merchants say, that they would never buy a pound of foreign flax, if they could get sufficient of the growth of their own country.

Were Ireland mistress of this branch, her advantages would be much greater than England can boast, as her climate and lands are at least equal, and labour and living considerably cheaper.

The augmented price that flax and seed bears of late years is very visible. Quære, Is it not possible to over-load the mean wheel so as to disorder the whole machine, or in other words, may not the attention be too much ingrossed with the top of the branch so that the root or very foundation may perish? For there is no making cloth without yarn, no more than yarn without flax.

It

x INTRODUCTION.

It is beyond contradiction, that no way can be so proper to make a thorough establishment of this branch as to begin at the root or foundation to distribute those large sums amongst the poor, for raising flax and seed, and not to leave it in the power of every gust of wind and frown of an enemy to interrupt or baffle our schemes.

I have often observed the many vigorous attempts made by the honourable gentlemen in trust, to establish this branch, and as often guessed the rock it would split upon. I was not mistaken, for it is well known, the flaxseed that fifteen or twenty years ago would be bought for twenty shillings a hoghead, now cost from four guineas to five pounds and upwards, and the flax also high in proportion.

This augmented price would not have struck me so much had there been any visible rise among the English raised flax and seed, (but there is not) for I have had a continual intercourse of dealing between this flax country and Ire-

INTRODUCTION. xi

Ireland for upwards of twenty years, and find that their flax and seed bears much the same price it did so long ago.

Tho' the land-carriage from Parkgate to where the flax is grown in England, is upwards of 150 miles, yet I am now applied to by a flax-dresser in Dublin (who has proved the value of the English flax) to import him some from thence.

It is true, England has gained the art of raising as good or better flax and seed than any imported; and in two places in England large quantities are raised; the first is in Norfolk, the other which is more considerable, is a large tract of country which reaches from near the city of York to the city of Lincoln, in which there are several considerable markets and fairs for flax and flax-feed, hemp and hemp-feed, namely, in Yorkshire, York, Howdan, Coward, Selby, Wighton, Snaith, Pontifract and Doncaster, beside several of less note. The following is in Lincolnshire, viz. Lincoln, Gainsborough, Ep-

Epworth, Axa, Thorn and Swimfleet; and Lin and Wisbige in Norfolk.

In these markets it is common for flax to sell at nine shillings a stone in the tough; however, do not imagine that this high price is owing to a scarcity of foreign flax among them; for Hull is a sea-port town, where foreign flax sells lower than in Dublin: therefore it is the real merit of English flax which fetches the price.

Perhaps my readers may think I talk like a traveller, when I tell them, that I have seen in Lincolnshire, a piece of flax-land, containing sixteen hundred acres; but however it is fact, and this all sown with seed of their own saving.

I do not wonder that the gentlemen of Ireland should be strangers to this flax country, as it lies out of the road to any public place, as Bath, London, &c. and as these flax farmers seldom go abroad, their art is not likely to transpire to Ireland, without particular encouragement.

In

INTRODUCTION. xiii

In the year 1760, I lived in Cheshire, and in said year sowed about 20 acres with flax-feed; but as every one there was a stranger to said branch, (there not being any grown within 100 miles of the place) my undertaking was laugh'd at; and even a flax-dresser pretended to convince me, that I could not raise flax there worth 20s. a hundred; but soon after I sold himself some for 60s. This encouraged several of my neighbours to sow the following season.

In 1761, I sowed 63 acres with seed of my own saving; from this crop I raised upwards of 600 bushels, and the flax was good also.

In 1762, I sowed 30 acres in Wales, and succeeded, and sold some of it to the Isle of Man, which was imported to Ireland by the name of America seed.

I mention these particulars to shew how easy it is to introduce this branch by a person versed in it, and could have men and machines from the flax-country.

S U B-

SUBSCRIBERS NAMES.

SIR Fitz. Aylmer, B. David Geoghagan, Esq; Lucius O'Brien Esq
 John Ash, Esq; John Jones, Esq; Robert Patrick Esq
 Earl of Belvedere Mr. John Gregg John Poynton Esq
 Lord Belfield Sir Duke Giffard, B. George Parker Esq
 Hugh Black, Esq; Joseph Henry, Esq; Caleb Powel Esq
 Mr. James Black Hugh Henry, Esq; R H Rochfort Mervin Es
 Mr. Thomas Birty Charles Harmon, Esq; R H Rob Rochfort Esq
 Mr. Geo. Bainbridge Lord Headford Richd Robinson Esq
 John Winn Backer, Esq; William Henry, D. D. A. Rich Esq
 R. H. Wm. Brabazon, Dean of Killaloe FRS Mr. James Reilly
 Esq; John Harvey, Esq; Mr. Rich Rutledge
 Mr. Brunton Mr. C. Harman William Robinson Esq
 Hugh Brown, Esq; Francis Harvey, Esq; George Read Esq
 Langford Burleigh, Esq; Mr. Michael Harney Thomas Richards Esq
 Rev. Mr. Beatty Loftis Jones, Esq; Mr Thomas Richmond
 Mr. James Brian Mr. Hugh Jordan Mr. John Burtiel
 Mr. John Bell Wm Jephyon, Esq; John Reilly Esq
 Major Brady Rev Norris Jephyon Stephen Rateliff Esq
 Reily Balfour, Esq; Richard Jones, Esq; R. Smyth Esq
 Jos. Brooke, Esq; Mr. Thomas Johnnton Reily Towers Esq
 Mr. James Barlow Ld Bp of Kilmore Dan Tighe Esq
 Mr. Rob. Boyce Cha. King, Esq; Duke Tyrrel Esq
 Henry Brooke, Esq; Mr. James Kane. George Tyrrel Esq
 Thomas Craston, Esq; Sir Richard Levings Bt Mr. William Tobin
 Daniel Cheneux, Esq; Lord Longford Wen. Thewlves Esq
 Sir James Caldwell, B. Richard Lehunte Esq Thomas Trottor Esq
 Vasey Colclough Esq; Francis Longworth Esq Lord Wandisford
 Dixy Coddington, Esq; Gorges Lowther Esq Sam. Wilkinson Esq
 John Curtis, Esq; George Lowther Esq James Wilson Esq
 Mr. Richard Craige R Hon Ant Malone E. Richard Weathers
 James Duncan, Esq; Sir Thomas Mande Bt Godfrey Wills Esq
 Charles Dempsey, Esq; Sam Mullin Madden EA. Woods sen. Esq
 Joseph Daley, Esq; Ar. Magan Esq A. Woods jun. Esq
 Mr. Charles Dowdal Hugh Maguire Esq Adam Williams Esq
 James Dexter, Esq; Earl of Mil-town John Grogan Esq;
 Wm Dexter, Esq; Earl of Meath Knox Grogon Esq;
 Thomas Dames, Esq; Lu. ius Moore Esq Arthur Dames Esq;
 Thomas Dawson, Esq; Mr. Cha Mercer
 John Dyton, Esq; Thomas Mitchell Esq
 Francis Deane, Esq, A. Mervin Esq
 Ol. Fitzgerald, Esq; Gust Moore Esq
 Ralph Fetherston Esq; William Mares Esq
 R. H. Rob. French, Esq; William Naper Esq
 Richard Fartel, Esq; James Nugent Esq
 Wm Forster Esq; Lord Newtown
 James Fortescue, Esq; Ulysses North Esq
 R H Lord C J Gore O. Nugent Esq;



[illegible]

SUBSCRIBER'S NAMES.

Sir Archibald Acheson Bt	W. Dance Esq
Robert Adair Esq;	John Darley Esq
Mr. Joseph Browne Merchant	Edward Ellis Esq
Rev. William Boyd	John Echlin Esq;
Mr. Bermingham	George Evans Esq
Lord Brandon	Brabazon Eccleston Esq
William Blacker, Esq;	John Enery Esq
Sam. Blacker Esq;	John Foster Esq;
Hugh Boyd Esq;	Ol. Fairtlough Esq;
Henry Baker Esq	Alexander Filgate Esq
Wallop Brabazon Esq	Rev Dr Foster
William Brabazon Esq	Revd. Thomas Fergusson
Anthony Brabazon Esq	Anthony Foster Esq;
Sir Patrick Bellew Esq	John Gebb Esq;
Henry Byrne Esq	Mr. Edward Gardiner
Gor Byrne Esq	John Green Esq
Mr William Brereton	Mr. George Gardiner
George Bannerman Esq	John Gamble Esq
Mr. John Black Merchant	Thomas Gaylard Esq
John Ball, Esq;	Samuel Gordon Esq
Revd. William Batt.	Mr John Gregg Merchant
Austin Cooper Esq;	Mr Henry Gartside Merchant
Capt. Francis Black	William Graves Esq
Mr Bart. Brett Merchant	Mr Thomas Hull Ingram Mer
Mr Geo Barclay Merchant	Mr James Hudson ditto
Mr Charles Coislet Esq	Mr Thomas Houston ditto
Thomas M'Claine Esq	Mr John Holmes ditto
—— Chetwood Esq;	Edward Hall Esq
John Crilly Esq;	Charles Hampson Esq;
Edward Corry Esq;	Mr Luke Higgins
Walter Cope Dean Dromore	John Hatton Esq;
Ben. Chapman Esq;	Gor. Howard Esq;
Sir Henry Cavendish Bart	Mr. Geo. Henderson
Thomas Cobbe Esq	Rev. Christopher Harvey.
Charles Craven Esq	John Harrison Esq
John Courtney Esq	Henry Hughes Esq
Ambrose Cramer Esq	Mr Thomas Hughes
Mr John Dunbar Merhhant	Rev Fra. Hamilton D D
The Rev James Dixon Dean of	Mr Richard Jackson
Elphin	Rev. Ebenezer Jacob
Mr. James Donahoo	Benjamin Johnson Esq
Charles Davis Esq;	Rev. John Jackson
Dennis Doran Esq;	Mr. Robert Johnson
Edward Donovan Esq;	John Keating Esq;
N. Donnellan Esq	Michael Keating Esq;

SUBSCRIBER'S NAMES.

William Knox Esq
 Mr John Kelfo Merchant
 Mr John Long Merchant
 Matthew Lyffer Esq
 Rev. Peter Lombard
 Rev. Walter Lindsay
 Lord Lowth
 Rev Dr William Lill
 Godfrey Lill Esq;
 Robert Lambert Esq
 Messrs James and Hugh Lang
 Merchants
 Alexander M^cClinack Esq
 John Moor Esq
 Rev Constantine Mitchell
 Malcolm M^cNeale Esq;
 Robert Moxham, Esq;
 Robert Magoucery Esq;
 Alex. M^cGawly Esq;
 Francis Moore Esq
 Wm Montgomery Esq
 Rev Mr Matthew M^cLeane
 Mr John Marshal Merchant
 Mr Joseph Montgomery
 Thomas M^cLaine Esq
 Mr Martin Merchant
 Charles Newcomen Esq;
 John Nugent Esq;
 James Noble Esq;
 Rev. Thomas Norman
 Rev Richard Norris
 Mr John Owens
 Samuel Osborn Esq;
 Messrs William and John Ogle
 Merchants
 Rev. Nath. Preston
 Thomas Prendergast Gent.
 Mr George Parterfon

William Quinn, Esq;
 Matthew Read Esq
 John Ruxton Esq
 Qbbons Ruxton
 Benjamin Read Bowen Esq
 Denny Rayments Esq
 Thomas Read Esq;
 Francis Ryan Esq;
 William Stearne noy Esq;
 Robert Scott Esq;
 Pat Savage Esq;
 William Stewart Esq;
 Price Stewart Esq;
 Hugh Savage Esq;
 Robert Stephenson Esq;
 Philip Savage Esq;
 Andrew Savage Esq;
 Jos Sothebry Esq
 John Smyth Esq
 Thomas Smyth Esq;
 Robert Scott Esq
 William Stewart Esq;
 Andrew Thomas Stewart Esq;
 Francis Savage Esq;
 Mark Synnot Eso;
 Edward Tonge Esq;
 John Taaffe Esq
 Thomas Tipping Esq
 Edward Trevor Esq;
 Mr Thomas Thornton
 Mr Robert Tronson
 John Wynne Esq
 Mr Richard Young
 Hans Wood Esq;
 Stewart Wilder Esq;
 Mr John Walter
 George Walter Esq

2

Mr George Harrison
Thomas Pritchard Gent
Rev John Gibson
Messrs William and John Ogilvie
Samuel Osborn Esq;
M^r John Owens
Rev Richard Norris
New Thomas Norman
James Noble Esq;
John Nugent Esq;
Charles N. Woodson Esq;
Mr Munn Merchant
Thomas W. McEneaney
Mr John Nuttall Merchant
Rev Wm. Nuttall Esq;
Wm MacGourty Esq;
Francis Moore Esq;
Alex. McCarty Esq;
Robert Mayhew Esq;
Malcolm McKinnon Esq;
Rev Constance Mitchell
John Moor Esq;
Alexander M. Clark Esq;
Messrs James and Hugh Lang
Robert Lambert Esq;
Godfrey Lill Esq;
Rev Dr William Lill
Lord Lowth
Roy Walter Lindsay
Rev Peter Lombard
Matthew Lytle Esq;
Mr John Long Merchnt
Mr John Keith Merchant
William Knox Esq;

George Walker Esq;
Edmund Walker Esq;
Miss Woodhouse
Edward Willet Esq;
Francis Woodhouse
Mr Richard Young
John Wynne Esq;
Mr Robert Toulson
Mr Thomas Thornton
Edward Trevor Esq;
Thomas Topping Esq;
John Teste Esq;
Edward Tonge Esq;
Mark Sparke Esq;
Francis Savage Esq;
Andrew Thomas Stewart Esq;
William Stewart Esq;
Robert Scott Esq;
Thomas Smith Esq;
John Smith Esq;
Joseph Sotheby Esq;
Andrew Savage Esq;
Philip Savage Esq;
Robert Savinien Esq;
Hugh Savage Esq;
Pride Stewart Esq;
William Stewart Esq;
Par Savage Esq;
Robert Scott Esq;
William Stearnes Esq;
Francis Ryan Esq;
Thomas Read Esq;
Denny Rayment Esq;
Benjamin Read Bowen Esq;
Joseph Raxton
John Ruxton Esq;
Matthew Read Esq;
William Quinn Esq;

THE
YORKSHIRE FARMER.

Book the First.

22:1:13.

CHAP. I.

*Directions for managing white flax in
ploughing, harrowing, sowing, pulling,
watering, and grassing.*

FLAX, if rightly managed, is a very profitable commodity, and much more so in Ireland than England, as the LINEN MANUFACTORY is the staple trade of the kingdom, and the climate and soil, in many parts, rather preferable.

I have found by experience, that old lay land is the best for flax, as it is least subject to weeds, and as flax loves fresh ground, begin to plough it about the first of March, with a furrow of about nine inches broad, and between three and four thick. Take care that

B all



all the land be clear cut and turned, and that it lies flat and even, with the grass side downwards. If the ground be stoney, or the plough-man bad, men with spades must follow the plow to turn what it misses, but take care they dig no deeper than the plough goes, which if they do, the next furrow will turn into the hole they make, by which means the harrows cannot come at it, to raise mold sufficient to cover the seed. Great care must be taken that it be ploughed even, for the above reason. By the middle of March the ploughing ought to be finished; and it should then be well harrowed to raise plenty of mold, and to scratch the roots of the grass, in order to kill them, and set them a rotting, for by this they will become a kind of manure, and when ploughed up for wheat as soon as the flax comes off, they will be found dead and as fine as summer fallow. Being thus harrowed, gather all the sods and stones off, and throw them into the furrows. When this is done



done, sow the seed at the rate of 12 pecks to a plantation acre, which is about one third larger than an English chain acre. Lady-day, or as near it as the weather will permit, is the best season for sowing it. When it is sown, turn the harrow the wrong end foremost, and run it over once in a place. When it has been about a month sown, roll it, and in about a fortnight more weed it; but if it be lay land there will not be many weeds; however, it must be gone over, and no kind of weeds left, as they are the most pernicious enemies to flax.

Being thus cleared from weeds, the business is over till pulling time, except it be a very strong crop, and a rainy season; in this case it will lie down or lodge, and not feed well; so that it will be apt to spoil before it is ready to pull. The only help against this evil, is to send two men, one at each side the ridge, with turning rods about the size of rake-shafts, they must put the rods under the top of the flax,

raise it up, and turn it over. This is not very expensive, and will prevent it from mildewing, and otherwise greatly help it, 'till it be ready for pulling, which must be as early as possible, for this sort, above all others, must be made white flax of; tho' it never will be so good as that which stands upright, as it never feeds well, and the shove being soft, is apt to flatten in the working, and will not part freely from the harl, the skin of such is always thin and tender. This sort of flax generally grows on rich land, or under hedges in a warm situation, which draws it up tall and weak: this makes it necessary to divide your crop into white and seed flax, as almost in every field, there is a variation which is to be laid out for both sorts, in a profitable manner, provided it be done with judgment, and rightly timed.

As there are several sorts of flax that may be made, and that every sort requires a different management, I will first conduct my reader thro' the management

agement of the white flax from the pulling to the swingle stock; and then return to the seed flax.

The white flax being fixed upon, if it answers the following tokens it is ready to pull, viz. If the seed be perfected in shape, but not half ripe; if the leaves begin to wither and fall off, about one third of the stalk from the bottom upwards; if the stalk turn a pale yellow; and if the buttons, or boles will strip, each separately, and take with them a string of flax to the root without breaking; if this last experiment hold good, it is a sure sign that nature has done her work, by giving the flax a good skin all the way up to the top of the stalk; (for sometimes it does not get so high.) If these remarks concur, the white flax is fit to pull, and you may fall to work.

Tye up the sheaves to the size that a band of about eighteen inches long will reach round: make the bands of the small under-growth: take care in pulling that you do not place your
hands

6 *The Yorkshire Farmer,*

hands too low down, so as to pull up any weeds, or under-growth of flax, which will spoil the good flax, both in watering and working. The smallest part of the flax is close under the boles, this is the place to take hold of it for pulling. Your hands being thus placed, what does not reach so high as to be taken hold of is of no use; leave it in the ground rather than spoil the good flax. As much of the flax as is pulled one day, should be put into the water the next, for if it be too dry the consequence is bad.

The softer the water the better; bog water is good, and so is that of a clay or marl bottom; but above all, take care the water does not come through or from lime-stone quarries; this piece of experience I bought at a dear rate, (See the Remarks.)

You should make choice of no larger a pit than what will barely contain your flax, for the lesser the quantity of water, the better the flax will rate, (see Remarks.) The pit should
not

not exceed three feet and an half deep, and about fifteen feet broad, the length to be proportioned according to the quantity you have to put into it. It is further adviseable to have three or four partitions across your pit by the way of dams (which partitions are easily left when the pit is making,) and these will prevent the communication of an excess of water.

When you begin to put the flax into the water, lay the first row across the end of the pit, with the root end uppermost; but lay all the rest with the seed end uppermost, and let no part of the flax but the seed end be seen; for before it is pressed down, it will stand almost upright in the pit.

If one sels or row be not sufficient to fill the pit, lay on another and another, but the water ought to be no deeper than that three rows at the most will fill. It should be filled to such a firmness, that a man may walk all over it with his shoes on without being wet. (See Remarks.

Being

Being thus in the pit, begin at the place you left off laying the last row, to sod it. Lay the sods close to each other, with the grass-side downwards, so that the least bit of the flax may not be seen. The sods must be cut thin like scraws, but not above two feet long, and one broad and they ought to be ready at the pit's side. Your flax being thus sodded, you should tread it so as to fetch water above all the sods. If it be sunk so stiff, that the treading of one man can't get water, let three or four stand together, or one man carry another on his back. This often happens to be wanted, particularly when the flax begins to work and swell in the pit.

I never had flax better watered than when it took a great weight in treading: I often trod it with an horse, and when he disordered the sods took care to lay them right again.

It must be trod three times a day, namely, morning, noon and night: the more it is trod, the better it rates; and

it

it will work like new ale in a guile-fat, which works the faster the oftener it is stired. This may seem an odd comparison to those that do not understand it; however, it is fact, for it will froth and work up surprizingly in the time of its rating, and particularly just after treading. Let no water in, or out of the pit, while the flax is in it. No certain time can be fixed that it will take in the water; circumstances in this case differ, respecting the heat or coldness of the weather; the softness or hardness of the water, or the goodness or badness of the flax; for good flax will take more rating than bad. I sometimes have had flax as well rated in six days, as at other times in a month, so much do circumstances differ.

The following tokens for the well-rating of flax are to be observed, viz. the first four or five days after it is put into the water, it will swell till it is at the heighth of working; and after this, it will fall till the water comes

C

over

over the fods. When it has been about five days in the pit, take out a sheaf, and try if it be very slippery, and if the stalks break and start out of the skin when they are doubled, and if the skin peel freely from the stalk, also if the seed or boles shake off with freedom: these are all signs of its being duly rated; but the safest way is to take a piece out every day, and dry it on a bush, and then if the stalk break and part freely from the skin, it is a sure sign of its being sufficiently rated. All these tokens will assist you in this material point.

Your flax being thus rated, take it out of the pit, and let it drip a day on the pit's side. Be careful that it be laid straight at pulling it out of the water, for the doubling of it when wet, will chafe and damage the flax.

When it is drained, carry it to the ground for spreading. Cast the sheaves at about the distance of two yards from each other; and in the casting let care be taken that they do not fall on the
ends

ends in a break-neck manner. Let the spreaders begin at one side of the field, and lay the first row straight, or it will disorder the whole. It must be spread thin and even, without lumps or crossing, and with all the heads one way.

The best land for spreading it on is meadow, lately mowed, or for want of this, a pasture field clear of thistles, docks, &c. which would keep the flax from the ground, and give the wind an opportunity to blow it away and ravel it, whereby it would be rendered of little use.

Bog might do for spreading, but the forementioned grounds are preferable; moreover it serves to fertilize the soil by the oily slimy substance which is washed from the stalks.

When the flax is thus spread, let it lye about eight or ten days, till you observe the skin to rise from the stalks at the top branches, where it is crooked, or has a bend; in these places the flax will rise from the stalks, and almost

most resemble fiddle-sticks by the hair being stretched along it: when this comes to pass, take care to turn it with turning-rods prepared for that purpose, about the size of a rake shaft, running them under the top end of the flax, and turning it over, leaving it in the same position as before, thin, straight, and clear of lumps. A good hand will turn two or three acres a day. It is not to lye so long after turning as it did before, but it is necessary to get some dew or rain in order to give it an even colour on both sides.

Sometimes it happens, when the flax is taken too soon out of the pit, that it must be turned two or three times in order to bring it to a right consistence. Take particular care that the worms do not damage it by drawing it into the ground and chafing it, which sometimes happens, particularly in spring rates, and where the ground is bare of grass. I have seen great damage done in one night by the worms. When you find your flax answer to the
above

above description of rising from the stalks like fiddle-sticks in crooked places, &c. it is well watered and graffed. Take it then into the barn for breaking and swingling.

But before I go any further, let me caution my brother farmer to be particularly careful, through all operations, to keep his flax straight and even at the roots, and the roots all one way; this being a very necessary piece of care, in order to make it yield well to the hackle, &c. &c.

As I have now done with the white flax 'till the breaking and swingling, I shall drop it for the present, and proceed to the seed-flax in imitation of white.



CHAP.

C H A P. II.

The pulling, watering, and management of seed-flax, in imitation of white flax.

THE Seed-flax must stand about three weeks longer than the white. It will shew itself to be ripe by the leaves fading and falling off, and the boles turning brown; but beware of letting it stand till the seed in the bole turns brown; for if you do, the seed will be nothing better, and the flax a great deal worse. It is a great mistake to let the seed flax be over ripe. (See Remarks.)

Observe the same directions in pulling the seed-flax as for white, only make the sheaves a little larger; set them up in a propping manner three leaning to each other. In three or four days after, if the weather permits, make them into small field stacks, no larger than you can reach
with-

without getting upon them. Make them like corn stacks, only with this difference, that the seed-ends must be outwards, in order to dry the sooner, and keep the stalks from being weather beaten. (see Remarks.)

Thus let them stand about a week, and then make them over again, by which means the top of the stack will become the bottom. Lay a little weeds, or the under-growth of flax on the top of the stack in order to make it cast the rain, and keep the upper sheaves from the sun and weather.

A few sheaves turned brown or grey would spoil a great parcel, in the beauty of its colour; for let the colour be what sort it will, it ought to be even, which is impossible to accomplish without great care before it goes into the water. Let the stack stand, after turning, about ten days, after which take it into the barn, and ripple the seed off with rippling combs, for that purpose. (See the cut.)

Being

Being thus rippled, tye it up in small sheaves, and water it in the same manner as directed for white flax; also observe the same directions to know when it is rightly rated and grassed; in short treat it in every case as the white flax.

As to the seed, it may lye in the chaff or boles all winter, 'till it is wanted in spring, at which time riddle it first through a wide riddle, in order to take out all the long straws, pulse, &c. This done, take it to the mill and shell it as you would do oats: this is a ready way of getting the seed out without waste, and, on the shelling it may be winnowed at the mill.

I shall spare myself the trouble of giving any directions about winnowing, as most people are perfect in that art. As it is winnowed in the same manner as corn, saving only as to the sieves, which must be suited to the size of the seed.

And now, gentle reader, please to accompany me, once more, to the field of pulling, and I will shew you another

ther and a more general way of raising seed-flax, in imitation of black or blo Dutch; but in truth, I have seen and reared better and higher priced flax, by the following management, than ever I saw come from Holland.



D C H A P.



C H A P III.

Directions for the management of black or bunch-rate flax, in imitation of blo or black Dutch, and to save the seed in perfection.

THE seed flax must be all of the same degree of ripeness. When you begin to pull the bunch-rate, arrange your pullers all in a row, at one side of the field, let every puller take about two yards broad, and lead on at about the same distance before one another. Spread the flax after them thin and even, with the tops all one way, as white flax is spread on the grass when it comes out of the pit. Take care the first puller lays his row straight that it may be a guide to all the rest. When pulled, and thus spread, let it lye till it gets a grey colour, which will be in three or four days, particularly, if there be heavy dew or rainy weather; but if not, it will take a longer time. Turn it
it

it with turning-rods, as directed for white flax, that both sides may get a grey colour alike; by this means the seed will be pretty rash, therefore handle it gently that the boles do not shake off in gathering and binding, of which there will be the less danger, if you make large sheaves. Hereupon take it home and beat out the seed with beaters, for that purpose, made of a piece of wood, twelve inches long, two thick, and six broad, and in this fix a handle sloping wise, as in the cut.

Spread two rows of flax on the barn floor with the seed ends to meet. Then beat out the seed with your beaters; for this is by much a quicker, safer, and better method than threshing, as it does not break or ravel the flax. Tye the sheaves up with two bands, one at each end, and lay one half of the sheaf with the tops to the roots of the other half. Make the sheaves as large as a middle-siz'd wheat-sheaf. Being thus prepared, take it to the water, but this must not be sunk with fods, or any other weight, but

but must swim upon the water, lying in rows, each sheaf close to another. It must be turned every second day, which is easily done, with a long fork, having about two inches of the points of the grains bent, in the nature of a muck-drag. For its being well watered, observe the directions, as for white flax, with this addition, that it will sink under the surface of the water when it is about enough rated, but not to the bottom of the pit. If it should be left till it sinks to the bottom, there is great danger of its being over done, or in plain terms, rotten. These are known facts amongst the flax farmers, but for what reason nature thus varies her operations, few trouble their heads to philosophize about the matter. Were a curious person however, to attend the flax throughout the process of its rating, he might infer a great deal, from its rising, and falling in the pit; its losing and regaining its spirits, &c. &c.

Being duly watered, take it out and let it lye on the pit's side all night to drip;

drip; then take it to the ground intended to dry it on; but it must not be spread flat, but set up almost like a sugar-loaf, the sheaves being in two parts (that is) the heads each way it will easily part in the middle, one half of which is enough for a rickle, (so called) take it by the top and spread it round, giving the root end a good splay, so that the wind will not easily throw it down; clap the tops close together, so that, as I have said, it may resemble a sugar-loaf, standing so thin and open, that it will soon be dry; but it will be the better to get a little rain before it is bound up.

The boles of this flax will be well broke as above directed, so that there will be no more to do than to winnow them, and there is no doubt of the seed being very good; I have known such flax to sell, in the rough, in Snaith market, Yorkshire, at sixty-four shillings the hundred weight, and the seed from it, as good as any foreign seed.

C H A P. IV.

*Directions how to manage dew-rate flax,
and to save the seed in perfection.*

SOME set it up in stooks, after pulling, to dry like corn, letting it stand perhaps three weeks, or a month. This is a bad way; for standing in the stook so long, in order to dry the seed, tenders the out-sides of the sheaves to such a degree, that they will not take so much rating as the in-side, and will therefore be undoubtedly rotten, before the in-side is enough rated.

The best way is to spread it after the pullers, as directed for bunch-rate, and to give it an even grey; then beat out the seed; and, about the first of March, spread it on the grass, thin, and even, and manage it the same way in grassing as white flax; also observe the same tokens for its being well grassed.

I have

I have had flax well dew-rated, with the seed on, by spreading it after the pullers, as above, without any more trouble; so that it breaked and swingled, and in short answered well every way. But I never knew it done by any one but myself; and I never ordered it thus but one year; in which year, I had twenty seven acres rated thus: but it is necessary it should be round bunned, or coarse stalked flax; and it requires a good look out, lest it shed the seed, by lying too long on the grass, or getting too much slavery under the weather.

When it is enough rated, take it home for working. The seed of this dew-rate flax is undoubtedly very good, and there is also less trouble attends the flax; but it is not so good in quality, neither do I think it yields so well. Indeed it is scarce ever done, but in a country that has not the conveniency of water.

C H A P.

C H A P. V.

*Directions for breaking and swingling
flax, as in England, without fire.*

AS I have reminded my reader to take great care that his flax be kept all one way, and the roots even, it's to be hoped that this caution may prove sufficient, if not it will occasion the more labour to the breaker, for it must be very even at the roots, before it be put into the breakers, or he never can make good work. Wherefore before he begins to break, let him take a sheaf, and slacken the band, but not loose it quite; then chop the root end on the ground; this done, pull all the loose rubbish it has gather'd from it; then take a little more than he can hold in one hand, and again jump it even at the root; take hold as near the top as possible, so as to hold it fast; then take a little of the top from under the hand, bring it round the flax, and lap it

it round his thumb, by which he may hold it faster than if he had no more than his fingers could meet about; bend it two or three times backwards and forwards, so as to make it supple close to the hand; put it into the breakers, keep it thin spread in them, and as he works it turn it often. When the root is broke, let him stroak it smooth, and pull the end; then break the top-end and the root-end again.

Being thus broke, let him begin to swingle, holding it in the nick of the swingle-stock, with the left hand, and the swingle hand in the right; let him always hit the top of the stock above the nick, and it will glance down past the nick with full force through the flax.

When the root-end is swingled once over, hackle the top-end with the foot-hackle, to take out the rough tow and shoves which are hard to fetch out effectually with the swingle hand alone.

When the flax is good and rightly watered, it is easily worked, three times going over with the swingle hand

E

will

will be sufficient to clean it from shoves.

If it be rightly swungled by a good workman, it will be quite clear of tow, to all appearance, before it goes into the hackle; so that it will be easy to count every harle in it, and the root will be as even as a pound of candles, and look as glossy, after the swingle hand, as it does after the hackle.

When we see a parcel of flax dressed to this perfection, in Ireland, that will fetch, in the rough, sixty-eight, or seventy shillings per hundred, we may venture to pronounce that the most essential part of this noble branch, which ought to be the first introduced, has at last found its way into this kingdom. But though I have given rules, as above, for a swinger, I am certain it's impossible to make a workman without ocular demonstration. It is true, if a learner had an old workman to look at, two or three days, these directions would be of great use to facilitate his instruction.

Take

on breaking and swingling flax. 27

Take care, whatever you do, not to dry any flax with the fire, or even the sun, after it gets a sweat in the mow; for if you do, it will certainly reduce both the value and weight, making it light, fussy, and brittle.

I have often been told by the Irish, that they thought it impossible to dress flax without fire; and, on the other hand, when I have told the English that the Irish dried their flax with fire, they wondered as much, thinking them very ignorant for so doing.



C. H. A. P.



CHAP. VI.

Observations on Flax-Seed, of its being worn out or tired, and how to refresh it, &c. &c.

FLax-Seed is a very deceitful grain; for, though it may look well to the eye, yet it may not be worth a penny a cart load, for sowing. Indeed, if it be of a good quality, it's no worse for looking well, by being clean and bright, &c.

The English flax-farmers are as much on their honour in supporting the character of their seed as that of their horses; nay, more so; for it's impossible for a person to sell a parcel of seed amongst them, at any price, if he be not known to be in a good breed (as they call it:) so that he must be well known to be a man of a good character, and his seed well vouched.

It is incredible to tell the difference there is in flax-feed; which I have seen
proved

proved more than once: an instance or two I beg leave to mention, viz.

A farmer of my acquaintance lived about twenty miles from the flax country, and, tho' it was no farther off, yet he was quite a stranger to the branch; but, as he was a pushing, schemeing man, he made a journey over to the Isle of Axa in Lincolnshire, the most famous part in all England for flax. He staid a few days among the farmers; and, as he was a smart, sensible man, without doubt, he returned as well instructed as the nature of such a journey would admit. He ploughed up twenty acres of good old layland, and sowed it with flax-seed which he bought at an oil-mill, and which he said, looked very well, being large, bright, and clean, and which grew very vigorously 'till it was about fourteen inches long; whereupon it began to blossom, and never got to be half a yard in height. He was greatly surprized at such a disappointment; and,

as

as the land was good, could not unriddle the mystery.

However, he was not discouraged beyond hope; as he remembered that the flax-farmers, when he was in the flax country, sold their seed for four pounds per quarter; so that if he made no use of the flax, the seed, as he apprehended, would pay him better than any thing he could have sowed his land with.

Upon this presumption, he took a sample, and went to sell it at the time of year; but not a grain could he dispose of, at any price, though the farmers were selling, one to another, at four pounds a quarter.

He wrote me a pitiful letter, complaining of the flax-farmers, believing they combined against him, not to buy his seed, in order to deter him from sowing any more.

However, I advised him to employ a person to sell it by commission, and recommended a noted flax-buyer to him for that purpose. He took my advice,

advice, by which means he sold his seed at four pounds per quarter.

However, it was a bad job for all sides. The buyers lost their crop, and the sellers their credit. The flax was so short that it could not be wrought; and as to him who sold it by commission, he has told me since, that his credit was hurt so much, by selling this parcel of bad seed, that he never could sell a peck since, in the commission way.

This shews how cautious a farmer ought to be in the choice of his seed. Amongst many instances of this sort, I shall only mention one more, that happened to myself.

About three years ago, I happened to be one bushel short of finishing about sixty acres. I sowed, that year, with good seed of my own rearing. The field I finished in, contained 12 acres, and was good land; wherefore I thought it a pitty to let any of it lye idle. Hereupon I bought some seed at a venture. It looked well, and grew
as

as vigorous as the rest of the field, till it was near half a yard long; and then it made a full stop; blossomed, seeded, and grew no more; tho' all the rest of the field, was from a yard, to a yard and quarter long.

A more demonstrable proof I never saw; for it was one of the sacks wherein the good seed had been taken to the field; and as some grains of the good seed stuck to the sack, it was easy to gather every stalk of flax that grew from the good seed, they being above twice the length of the bad species. Moreover, the branches of the good seed were long, and one aspiring above another, having a leader above all.

But it is not so with the bad seed; for all the branches are of a height; so that the top will be as even as a clipped hedge. This is a sure sign that the seed of such flax is tired, bad, and worn out.

Perhaps my reader would be glad to know what I mean by seed being tired,

tired, as also how to help tired feed,
&c.

First then, let us consider that it is from the hot climates that this seed comes, namely from North America and Riga. It is true that the heat in the latter, only continues about three months; but that is the season in which the flax grows, during which time it is exceeding warm.

The heat in America holds much longer; and it is well known, that any plant or vegetable, which produces a fluid substance, will ripen, in fruit and seed, to a greater perfection there, than it will in our colder climates, the skin being thin, kind nature, as it were, crams her receptacles full of rich juices suited to each plant, &c.

This, in flax seed is demonstrably proved by the oil-mills, as they find a considerable larger produce of oil from foreign new seed, than from seed that has been repeatedly sown for many years in England, tho' the latter shall

F

look

look brighter, larger, and plumper than the former.

The seed therefore, certainly degenerates by not producing so much oil in our cold climates, but instead of oil a thick skin, and within it a gross pulpy substance; and the longer it is sown here the more it runs to this harsh unkind matter.

Now, this oil is the very life and spirit of the flax; therefore, as this abates in quantity, the flax abates in its length and value.

Without doubt, were a parcel of seed, that is quite run tired in England, taken to those hot countries, and sown, it would regain its former good quality.

But, let not my brother farmers be deterred from saving seed in these colder climates under a fear of its degenerating, for be assured it may be sown four or five years before the degeneracy can be perceived, and then but in a small degree; so that it will last fifteen

or

or twenty years before it need be changed.

The farmers in England have a way of resting their seed (as they call it) which is done by barreling it up, and letting it stand a year or two without sowing; the longer it stands the better. This was discovered by chance.

A farmer happened to spare some seed after sowing, and let it stand two years; and, when he came to sow it at the end of that term among some seed of the same sort, it topped it in length eight inches. This accidental experiment has brought on a general practice, as it is found to refresh the seed in a surprizing manner.

There is no accounting for this amendment otherwise than by supposing that the pulp and skin meliorate by the evaporating of the watry particles, and by the cruder parts being mellowed and melted down, as it were into the body of the oil.

Thus any sort of seed of an oily nature such as rape-mustard, or cole-seed,

seed, will produce the more oil, the older it is; and it is oil (as I said before) which is the very essence of flax.

A farther caution is necessary, that your seed be clear from button seed, which is a very pernicious weed, and a great enemy to flax. Where this gets footing, the flax seed must be condemned for oil, be the seed of ever so good a quality, so fatal is this weed to it.

The seed of this weed is white and very small, not as large as the smallest grain of mustard seed; but there are as many joined together in a bunch as make a head of about the size and likeness of a waist-coat button, from whence it takes its name of button-feed. It grows on a small stalk which twists round the flax, as ivy about a tree, so that there is no getting quit of it either by weeding or swingling, for it will not part the flax along with the shove, and the increase is so very great that if there be only a few stalks in

— of course it will be as much as an
— of course it will be as much as an

an acre of flax, this year, the next it may destroy the whole crop.

There is another bad seed which is by some called wild-willow, and by others corn-bind. It is not much unlike hemp seed, but it is not quite so large; it also twists around the flax as ivy round a tree, which makes it impossible to be weeded out; however, as the seed is large, it will stay in a sieve that will let flax seed through, by which means it may be kept clear with care, and though it is not so multiplying a seed as button-feed, yet it is a great enemy to flax, and ought to be guarded against.

There are several sorts of flax seed which might be explained, were it worth while to go to the nicety of matters; but I have no intention to swell this work with matters of speculation, or with any thing that is not of immediate consequence to the farmers.

There are two principal seeds from whence we derive our growth; that of America, and that of Riga. The former

former is a bright bay seed, and produces a fine small flax; but the Riga is mostly a dark bay, and a broad flat seed; it produces a gross tall flax, which I am apt to think is most suitable for this degenerating climate, for it is easily cured and made finer by sowing it somewhat thicker on the ground.



I got the best breed of seed I ever had from Memmill in Riga. This Riga seed will last longer good, than American seed, in England; but it is not so beautiful to the eye, neither is it of so high a price in Dublin as American seed.



C H A P.

C H A P. VII.

Directions to make French sieves, and their use.

FRENCH Sieves, are so called, as they came from French Flanders. My father was the first who introduced them into England, about 60 years ago. The rim is about three feet diameter, and three inches deep; the bottom is made of parchment; two are made use of, and called a set; one of them is called the riddle, and the other the sieve. The riddle is punched with a hole thus,  it lets through the flax seed which is flat, and any round or square seeds stay in the riddle. The sieve is punched with a round hole thus , which lets through the small round seeds, such as rape, mustard, ketlock, or button-seed, but the flax-seed stays in the sieve. These holes must be punched to an exact size, or they are useless.

There

There is a particular art in dressing with these sives, which I shall spare myself the trouble of explaining, as it is impossible to be executed without seeing it put in practice; and even so, it is not easily learned.

There is not above six pair of these sieves in England, and about as many men who are capable of dressing with them. It is a calling of itself; and, at the time of sowing, they are very busily employed. A farmer pays about two shillings per quarter for dressing.

No seed requires to be dressed in this manner, save such as have run to weeds; and, in this case, though it is difficult to get the right knack of dressing or turning the sieves, yet the stirring of them any way, will clear a great deal of dirt, and seeds out.

The expence of a set of these sieves, at a moderate computation, is three pounds, and one set, and two men, will clean all the flax-seed for ten or fifteen miles round in a flax country.

C H A P. VIII.

*Directions for sowing and managing
Hemp and the seed in perfection.*

TH E Season for sowing hemp is from the first of April to the middle of May. It requires a deep, rich soil, if summer fallow the better; though stubbles will do, provided they be fine, and well tilled by a winter fallow, and manured. They ought to be ploughed in autumn, and ploughed and harrowed twice in spring before sowing. After the last ploughing sow the seed, and if the land be cloddy or rough, pulverize it, alternately, with the harrow and roller.

Contrive to sow the most weedy ground you have with hemp-seed, as it will most effectually kill the weeds, and put the ground in a good tilth for any sort of a crop that will follow it; but wheat is the most common crop
G used

used, and has been found most successful.

There are two sorts of hemp that grow promiscuously through one another, namely, the summer and winter hemp, otherwise called male and female; but it is the male or winter hemp that bears the seed; the female or summer hemp bears none, and is ripe for pulling at least two months before the seed or male hemp.

About the latter end of July, the female hemp will be ready to pull, as will be evident from its turning of a pale yellow, and the leaves withering and falling off; while the seed-hemp will be in its full vigour of growing, and the seed scarcely formed.

The female being thus ready for pulling, go along the furrows and pick it out from the male hemp; but, if you happen to break any stalks of the seed or male hemp, pull them up along with the female, as also any small seed hemp that may happen to be in the furrows, &c. pull it for female hemp.

After

After pulling, tye it in middling sheaves, with a band at each end; and for watering it, observe the directions for white flax, see page 7. Rate it and grafs it also the same way, observing the same tokens in every case.

Some will save no seed-hemp, but pull all together, as female or summer hemp; this is the least trouble, but not the most profit, particularly if the hemp be a gross strong crop; but if it be a small short crop, it may answer as well; for, when it is rightly managed in the white or female manner, it will fetch from four and six pence to five and six pence per stone; which is about two shillings a stone more than seed or peeled hemp will give. It must be break-ed and swungled directly as flax, and without fire.

As to the seed-hemp, let it stand untill the seed be ripe, which is generally about the latter end of September; then pull it and tye it up with one band near the top, and set it up to dry. When ready for threshing, make
an

an even place for a threshing-floor in the field, and spread a winnow-sheet, on which it must be threshed. When this is done, tye it up in two bands, and water it, sinking it with fods as white flax. When it is taken out of the water, set it up to dry, as directed for bunch-rate flax. See page 21.

Being thus set up, it will soon be dry to take home for peeling. This is good winter work for women and children; if it be large hemp it will be got peeled for two-pence a stone, but if small, it will cost two-pence half-penny. At times I have paid three pence, but that was in a country who were strangers to it; a child of ten or twelve years old, if active, will peel two stone a day, and the stalks are firing for them.

The hemp-seed is winnowed as other grain; but it is often deceitful, as a great deal of it will be hollow within, and have no kernel, though it will look near as well to the eye as the best; therefore the buyer ought to inspect

spect nicely into it, and to try its weight, which is the safest way to buy it by, tho' not a common one.

An acre of hemp well managed, as above, would clear at a moderate computation, about twelve pounds over and above all charges. There are very few farmers in Ireland or England, but what have some land fit for it, such as old gardens or land that is run to weeds, provided (as I observed before) it be well tilled and manured, but the weeds will be apt to grow the faster for the manure, if not effectually killed by summer fallowing.



C H A P IX.

Directions for the ploughing, harrowing, sowing, and full management of wheat, till brought to the haggard.

THERE are several ways of managing, and several sorts of lands suitable for wheat, such as summer and winter fallow, grass and stubble land; and summer fallow from clover-stubble after the crop of clover is off; potatoe-land also, flax-land likewise, See page 2.

g | Observe one general direction as an invariable rule, viz. never to plough your land above four inches deep, except it be of a very fertile deep soil, and always cut it clear and free from baulks; also plough it of an equal depth, that there may be no troughs, as it were, to hold water in the firm soil, at the roots of the corn, &c. (See Remarks.)

Lay your ridges eighteen or twenty feet broad, and take them up three times, as less will not give the sole
a pro-

proper sheed for water. At the first forming the ridges, harrow them across between every ploughing, in order to draw the mould into the furrows, or else they will be stripped too bare of soil.

When the ridges are got to a proper height, they must be put down one time, and taken up another, by which means they will be always kept in a right position, or form, and the soil will be firm and have a proper sheed, so that it will be impossible for water to lye soaking at the roots of the corn to starve or chill it.

As soon as the wheat is sown gripe it across the ridges, in the lowest places, where the water is likely to stand, in order to give it a free passage when it comes. Make your gripes not above eight or ten inches broad, and shread the earth as you throw it up.

It is common in England, to throw the plough out at a gripe, and to leave about ten inches unploughed at each side, which will keep the sides firm, and the gripe

gripe in the same place; so there will be no more trouble to clean them, than shoveling out what loose sods the harrow draws in, and in this case, two men will drain a large field in a day.

If it is clover stubble that is intended for wheat, the clover must not be eaten in the spring, which would drive the crop too late for mowing, that otherwise would be off in the beginning or middle of June, being a sufficient time to fallow the land for wheat, as clover stubble is generally mellow, and easily tilled. It must be ploughed as soon as ever the clover is off, giving it no time to grow. Three plowings is a sufficient fallow for clover stubble.

If it be natural grass-land, or corn stubble that is intended for a summer fallow, it is the judgment to plough it as soon as the wheat seed time is over. Take up the ridges and gripe them in order that they may lye dry all winter to meliorate with the frost, &c.

As

As soon as the busy seed time is over in spring, plough it again; there can be no set number of times ascertained for the fallow being ploughed. Every farmer is the best judge in this matter; for when he sees the weeds or grass begin to grow, this is the time in which it must be ploughed; as the very intent of fallow is to kill these pernicious enemies, by which means they become a species of manure, and as the roots rot and incorporate with the earth, they are rendered of all manures, perhaps the most excellent. General custom is to fallow or plough four times, if the summer be dry, and the ground not very weedy; but in a wet summer, the grass, weeds, &c. grows faster than in a dry one, and consequently require to be often torn up.

Your ground being well fallowed, the best season for sowing it is, from a fortnight before, to a fortnight after Michaelmas. Eight stone of wheat is sufficient to sow on an Irish acre. The

H

best

best way is to plough it in with a very thin furrow, at most not above two inches thick; for I am convinced that a great deal of seed is lost by being buried too deep.

When thus sown, it must be griped and water-furrowed, in order to lye as dry as possible. This done, all further trouble is over till April, at which time it must be rolled, and in the latter end of May weeded; and nothing more till harvest.

It's a great mistake to reap wheat too green, as I have often seen it done in Ireland. Let it harden well in the ear, and till the joints of the straw, turn from a green to a straw colour, the juices or sap being ascended from the joints give you sure warning of the ear's being ripe; for as long as the stem keeps green the grain keeps feeding.

When this token is verified, reap it, and set it up in stooks, and cover them with head sheaves at night, and in the morning take them off, in order to

give the corn-ends the benefit of the sun to harden in.

It carries an appearance of expence and trouble, but the benefit will by far exceed the cost; for two men will cover and uncover a great deal in a little time.

It ought to stand in stooks fourteen days before it is put into field-stacks, and to continue in field-stacks three weeks before it is brought into the haggard.

As to threshing or winnowing, it is not worth while to say any thing about them, further than to give the plan of a useful fan for winnowing all sorts of grain.



C H A P. X.

General directions for ploughing, sowing, harrowing, and mowing, or harvesting Barley.

IN October begin to plough your land for winter fallow that is intended for barley, except turnip-land, which must be ploughed as soon as the turnips are eaten off.

The land that is for winter fallow must be taken up in order to lye as dry as possible all winter. Plough it again the first of March, and let it lye till the first of April, from which till the middle of April, is the best season for sowing it, though some will sow 'till the middle of May; but a good deal of this may be owing to the season, for it is better to wait a month than to sow in a dirty, cold bad season, as barley is a grain, above all others, that will not bear inclemency. The ridges must be taken up in the last ploughing,

ing, in order to lye dry and high, and the furrows and gripes open to give a ready course to the water when it comes.

Sow the barley immediately after the last ploughing, and harrow it well. Ten stone is sufficient for an Irish acre.

As soon as it is harrowed, sow the grass-seeds, and harrow it once in a place after; then roll it, and you have done with it untill weeding time.

Take care it be well weeded, and throw the weeds into the furrows; being thus cleared from weeds, the business is over till ready for harvesting.

As most persons know when it is ripe, I shall only say, that the chief token is to observe the joints of the straw; when these turn from a green to a dry straw colour, it is ready for cutting; but no corn is ripe as long as the joints are full of sap, for those are the juices which supply the grain with its last nourishment, which keeps feeding or filling, untill the joints are sucked dry,

dry, and then the green cast departs along with the sap.

The readiest and best way for harvesting it, is by mowing with a cradle on the scythe; or, for want of this, an hoop made of a strong briar, sally, &c. the root end of which is fastened in a hole, made by a spike gimblet, in the shaft about eighteen inches from the heel of the scythe, and the top end of the stick must be brought with a bend over the heel of the scythe. The hoop must be crossed several times with a cord like net-work, in order to keep the corn from falling through.

The mower being thus equipped, let him begin to mow, leaving the standing corn on his left-hand, that is to say, he must leave the swarth leaning against the standing corn; and, if he is a dextrous workman, he may leave it so even and straight, that a cross straw will scarce be seen.

After each mower comes a gatherer, with a reaping hook, or a small rake, which

which makes it into sheaves. The compliment for every two mowers and two gatherers is one binder; and these five persons day's work to mow, gather, and bind, is four English acres of fair standing corn, either barley, beans, pease, or oats.

Being thus bound, it must be set up in stooks; the sheaves, propping against each other, press the tops well together in order to make them thin and sharp, which will shoot off the rain the better. They very seldom put any covering sheaves on their barley stooks in England, but leave the corn-ends exposed to all the weather, believing the corn to harden the quicker, and more kindly; however, as Ireland is a wetter climate, I would advise the farmer to cover them at night, and uncover them in the morning.

After stooking, the stubble must be raked with a swarth-rake, so called from the length of its head, which is six feet, in order to take a swarth-breadth at

at a time. It has one row of iron pins, each pin eight inches long out of the wood, and three inches asunder. It has a handle in proportion to the rest of the rake, in which is fixed a belt to go about the man's shoulders, to draw it in the nature of an harrow. When he finds his rake full, he must lift it up, whereupon the corn drops out; he then goes on again, always leaving the corn in the same place or range, in the nature of a wind-row. When the field is raked, he cocks the rakings like hay; and this is very useful to lay on the tops of the field stacks, as it will lye better than sheaves and turn the water; but in England, they never stack their corn in the field, but let it stand in the stook till it is ready to take home to the barn or haggard. However as Ireland is a moister climate, believe it a very good way, particularly if the corn is to be housed.

N. B. Spring corn, such as barley, oats, beans, and pease, are all harvested the same way by mowing, &c.

I shall

I shall refer my reader for directions on those heads, to the foregoing instructions for the management of barley, in order to save trouble in explaining it over again. As to wheat, it certainly is the best way to reap it with hooks.



I CHAP.



C H A P. XI.

*Directions for ploughing, sowing, and
harvesting Oats.*

OA T S is a grain that will grow almost on any kind of land, or with any kind of husbandry; but tho' sometimes tolerable crops are got by slovens, yet those who manage better may be sure of a larger return; and this is or may be got, chiefly by tillage, and letting proper crops come in their right course of succession, by which means the one crop is usefully preparative to the other.

If stubble of any sort be intended for oats, it is the better to be ploughed as soon as the grass is eaten off, which is generally about November, and then the stubble being turned under, and the roots of the grass or weeds being exposed to the frost, and the inclemency of the weather, they are killed, and instead of a nuisance, are rendered

der'd a great improvement. See Remarks. The land must be ploughed again, and sown in February, or from thence till the latter end of March.

I look upon twenty one stone of oats to be a sufficient quantity for any kind of land; for, though it is a grain that does not stool, or branch so much as barley or wheat, yet it comes in proportion to its nourishment in the ground. I am satisfied that one stalk, at twenty one stone per acre, will have as much or more weight of corn on it, than two would have at forty two stone per acre. When it is sown, gripe and water furrow it, to keep it dry.

When the oats is about three weeks or a month in the ground, if any grass seeds are to be sown amongst them, now is the time to sow them and roll them in. The oats must be weeded about the middle of June; then their business is over until harvest, or which observe the directions for barley; they must be mown and harvested the same way.

With-

Without doubt, by mowing, there is more fodder, and consequently more manure, besides all the hands it saves, which is a valuable consideration, this busy season of the year; moreover it should be the farmer's chief study to work his lands with as little expence and labour as possible; and yet not to be so penurious as to stint his lands of its proper due. There is a medium to be used in all things, and also much to be said in favour of genius and contrivance, even in farming matters, as it is, of all occupations the most beneficial to man.



C H A P XII.

Directions how to manage beans and pease, being mixed, they are called blendings; I shall treat of them both under one management, as they are both almost of the same nature.

BEANS and pease are a very beneficial crop, and a crop that does not take on, or impoverish ground. They are rather improvers to land; and they are a good crop for wheat to follow.

The time to sow them is in February, or in the beginning of March. Almost any sort of land suits them, but stubble land they are generally sown on. Though there may be a good crop with one ploughing, yet it is the best way to plough the stubble under in Autumn, and to plough it again just before sowing.

Beans will grow either on light, sandy, gravelly, or strong clayey land; but

but the latter suits them the best. The way to get the surest crop is to sow blendings, which is beans and pease mixed, about two beans for one pea, and then the beans are rodding for the pease; besides, if the land suit either the one or the other of them, there is no doubt of a crop; for, if either fails so that they be thin on the ground, the other will be the better corned. Being thus sown, gripe and water-furrow as usual in order to keep the land dry.

Take care to weed them in the proper season. They must not be drove too late, for fear of breaking the stalks, which will not grow again as well as other corn; they must not be rolled for the above reason. They are to be harvested the same way as barley. See page 54. Only, instead of being swarth-raked, they are gathered with a parcel of women and children, which will run over a great deal of land on a day. There is seldom any occasion to manure for this crop, and particularly for

for pease, if they are sown alone, for if the land be too rich, they run to straw.

Ten pecks of blendings are sufficient seed for an Irish acre; or, if beans alone, twelve pecks, or if pease alone, eight pecks. This is less allowance than is generally given, according to the old custom; but I am a great enemy to sowing thick any sort of grain, as I have so frequently proved the evil consequences thereof.



C H A P.



Directions for the ploughing, sowing and management of Buck-wheat, through all its variations.

THE chief use of buck-wheat in England or Ireland, is for manure; though some make use of it for bread; but it is very ordinary bread; not much better than that of pease; it will feed hogs, but pease are full as good, and will yield more corn on an acre; beside they are a sure crop, as they will grow on almost any sort of land.

I will say so much however, for buck-wheat, that where it hits, and is a full crop, it is the finest thing for manure that I have ever seen. I once had a crop that, even when it was rolled down, gave a task to a horse to walk through it, and the land gained so great advantage from this dressing, that the proprietor has good reason to remember

ber it to this day. The plant is very luxuriant and predominant over any weeds; so that the benefit does not wholly lye in the dung that it makes, but in its being an effectual clearer of ground from weeds.

The land that suits it best is that of a light soil, of a sandy, gravelly nature, tho' in truth, except a very strong clay, any land will bring a crop, provided it be well tilled to a fine mould.

Any sort of stubble that is intended for it, must be winter-fallowed, ploughing it early in Autumn, in order that it may meliorate with the frost, &c. and again, as soon as it begins to shoot in the spring, and the last time in April, just before sowing. The middle of April is the best time for sowing it.

When ploughed, before it is sown, harrow it once in a place, in order to level it, that the seed may not be buried too deep; then sow it at the rate of three bushels to an Irish acre; after which harrow it very fine. When harrowed, roll it; then you have no more

K

to

to do till it is fit to plough in for dung, which is when full in blossom, about midsummer.

This is done by first rolling it the striping way of the plough; and then plough it in. If it be for turnips, as soon as it is rotten, which will be about ten days, (being ploughed in the fullness of sap or juices) plough it up and harrow it once in a place; a man must follow the harrow with a rope tyed to it, to shake it, lest it drag the dung in heaps. Being thus harrowed, sow the turnip-seed, and roll it.

But if the land be for wheat, let it lye unploughed 'til the grass or weeds begin to grow. Then plough the dung up, and, in a proper time after, sow the wheat, and plough it in with the dung.

If you intend the buck-wheat to stand for seed, treat it in every respect, like pease, as it is harvested the same way.

CHAP.

C H A P. XIV.

Directions how to raise Rape and Cole-Seed, and also how to manage Burn-baiting, &c. &c.

I Shall treat of these two feeds under one management in the same chapter; as they are nearly of one quality, all the difference is, that cole-feed requires the greater depth of soil.

Rape and cole-feed are very profitable, where they meet with land that suits them, which is a black and deep soil; cold rushy bottoms, bog, or deep mountain is very good, provided it be duly pared and burned. For paring, and burning, (by others called burn-baiting) take heathy, boggy, mountainy, or rushy, wet and cold low ground, the more ling or heath and coarse grass, the better. If it be for reclaiming of bog, follow the directions under that article.

If

If the ground be deep, and will allow it, pare a sod about two inches thick, in order to raise all the ashes that is possible; but before you begin to plough or pare for burning, take a roller six feet long, in this fasten three belts of iron, quite round the roller, at two feet distance; these belts, or rather cutting-knives, as they are to perform that office, are about the breadth of a scythe, and are to have prongs to drive into the roller, so that the edge will stand upright. With this go across the ground intended to pare, which, when pared, it will turn up in sods two feet long, and save a great deal of labour of cutting by hand; the knives may be taken off, or put on occasionally, and the roller will serve for other uses of rolling corn, &c.

About the middle of April, begin to pare, and do not miss any opportunity of burning the sods when once dry, which will be in three weeks after cutting, if the season be not wet; but in a wet season, they must be set upon an edge,

edge, and they will dry the readier. Being thus dry, and ready for burning, make heaps of about a cart-load in each, with the grass-side downwards; lay them as light and hollow as possible, that they may burn the readier. There must be put some sort of kindling under to set it on fire, such as straw or sticks, &c. but little will do, if there be any rough stuff such as heath, rushes, &c. on the sods.

The way to burn it to the greatest advantage, is not to let the blaze break out, but keep it smoaking or smothering within, for the more it blazes, the more of the nitre ascends into the air.

Being thus burned, spread the ashes and plough them under, with a very thin furrow, at the most not above two inches thick; then harrow it, and when harrowed pretty fine, sow the seed. After sowing, bush-harrow it.

A peck and a half of seed, is the due for an Irish acre; which is about one third larger than an English one. Take care to water-furrow and gripe it well.

In

In the spring, weed it, and where it's too thick, pull up some plants, and set them in thin places, if any there be; if not, throw them away. Some will hoe the rape, but I take this to be superfluous.

The most famous place in England for raising this crop, is in the fenny countries, and they never hoe any; but I have seen farmers in other countries, take great pains in hoeing it, but this may be partly owing to their being strangers to the right management; and to their taking over-abundant pains thro' a fear of not doing enough.

The chief thing is to sow it even, and till well; there is then no fear of a crop; for the plants coming up thick, and having a broad leaf, smother the weeds, covers the ground, and keeps it light and mellow; so that in this case, I see but little need of hoeing. I had a field one year, and in order to be satisfied, (which was the best way) I sowed a piece in drills and hoed it with the plough, and another piece I hoed
by

by hand. I did not thresh it separate, but, in all appearance to the eye, there was no great difference, or at least, not any ways equivalent to the labour it cost me; but in fact it was all as good a crop as could well grow.

Where there is not burn-baiting, a good crop may be got by summer fallow, managed directly, in every degree, as for wheat, with the same manures, &c. One advantage in sowing rape is this, that the seed costs a trifle, perhaps not above 18*d.* an acre, and if it hit, it is a valuable crop, and should it miss, the loss of seed is insignificant, and the land can be sown with barley at spring, as there is time enough to discover what kind of a crop the rape will be, before barley seed-time.

Observe, that it is ready to reap, when the upper branches turn brown; be sure let it not be too ripe; of the two evils, the least is, to reap it too soon, rather than let it stand too long, for if the pods be in the least dry

dry or rash, they will open in reaping and shed the seed.

Birds of all sorts are very fond of it, therefore it must be watch'd for a month, before its reaping to the end of threshing; it is not altogether the value of what they eat, but in opening a pod, perhaps they will not get above one grain, and all the rest will drop out.

It is reaped in the same manner as wheat, but the handfuls are laid singly and light upon the stubble behind the reapers, thus it must lye without stirring till it's ready to thrash, which will be in about three weeks after reaping; for it must be very rash or dry, or there will be a loss in its not threshing clean.

Being thus ready for threshing, prepare a floor in the middle of the field, or most convenient for the carriage, by levelling the ground, on which must be spread a large reap-cloth, in the nature of a winnow-sheet, on which the rape must be threshed.

Spread

Spread the rows round, and thresh round. One man spreads before the threshers, another turns it after them, a third shakes off the straw, and a fourth carries it away. These four men are to supply six threshers and four carriers in; with four to fill the sheets, and one to rake off the pulse and riddle them. These set of people, being in all nineteen, will thresh six or seven acres on a day.

It is better to proportion the labourers, according to the quantity of rape you have, that it may be dispatched in a day or two, as rainy weather may prove obstructive, but if the rain should happen to catch you, throw up the corners of the cloth and cover it with pulse, such as stays in the riddle, which will turn rain extremely well.

There is no need of taking the seed off the cloth, but keep threshing upon it, till all is done.

Some will sell the seed to the oil mills as soon as winnowed from the cloth; others that do not want money,
L will

will heap it up on the floor, mixed with chaff, and covered up with the pulse, so that it will be round, and sharp at the top like a hay-cock; and thus they will let it lye, perhaps two months, 'till it gets a sweat in the chaff, which is very necessary, for, being of a clammy oily substance, it would turn mouldy when clean in the grainary, if it did not get a sweat in the chaff, as above; but this precaution will prevent the said evil.

It's immaterial to say any thing about winnowing it, as it is easily done by any one that can winnow flax-feed, or corn, as it is only suiting it with sieves to the size of the seed.

The straw was thought of no value formerly, but rather a nuisance in England, but of late years, the ashes it makes are found to be valuable for making soap; and the soap-boilers will buy the straw, perhaps two or three months before it is reaped, and will give from three to six shillings per acre,

according to the quantity that may appear to be on it.

N. B. About the latter end of November, if the rape be strong, so as to bear eating, (which you may judge of by the strength of the plant, or grossness of the stalk) turn sheep in, and eat it 'till Candlemas, provided you do not overstock it; but take care that they do not eat the stalks too near; they ought to go no farther than just to eat the leaves off, without entering on any of the body of the stalks, for fear of wounding them too deep.

Cole-feed may be eaten a great deal safer than rape, as it produces a grosser stalk; and when all the leaves are eaten off, about Candlemas it makes fresh shoots, and produces larger heads than if it had not been eaten; and, if the land be good, and deep, it will produce a more profitable crop than of any other grain whatever.

I have discoursed with several farmers in England, that know no other difference between cole and rape-feed than
the

the name. It is true, that the feed is nearly alike, and no difference is made in the price to the oil-mills, as they both produce one sort of oil ; but there is a material difference in the plant, and it is the advantage of a farmer to be well acquainted with it.

The cole-feed is a species of cabbage, originally from Holland. It produces a very large luxuriant plant in good ground ; it will produce a stalk like that of a cabbage, and the feed in proportion to the size of the stalk. A very full crop will turn out a last on an acre. When the sheep have eat the stalks bare, it is an easy matter to take them up, where too thick on the ground, and transplant them.

I once took as many superfluous stalks out of three acres, as transplanted an acre, which bore as good a crop as the rest, only a little later.

I am certain, a very great advantage might be made of this method in the manner following, viz. It is to be observed, that land for rape or cole-feed,

is fallowed all winter, and 'till the time of sowing, which is the latter end of June, or in July, by which means the rape takes up the land this year, and 'till it is reaped, which is about the latter end of June the next year; therefore it is too late for sowing any sort of crop but turnips, when the rape comes off.

Now, suppose you had half an acre of good land, or made it so by dunging it better than common, and tilling it a little extraordinary, at the proper season of the year, which is at midsummer. Sow on this half acre, one peck of either rape or cole-feed, but to chuse, cole-feed.

Now, suppose this to produce a very plentiful crop of plants, perhaps very few grains would miss, thus let them grow till Michaelmas, and suppose you have ten acres of either wheat, bare, barley, or oats, as soon as the corn is reaped, plough the stubble; let it lye a month or six weeks to rot, and then plough

plough it again; this will be near as good as a summer fallow.

About Michaelmas, turn sheep into the half acre of plants, to eat the tops off; then begin at one side of the field of stubble-fallow, and plow a furrow; in this furrow, set a row of these plants, a foot asunder, leaning against the side of the furrow; then plough another furrow against it, make the furrow about a foot broad, so continue till all the field be set.

If the land be good, there will be no need of dung, &c. but if it be poor, have rotten dung in the field ready laid in heaps; take baskets and lay a little at the root of every plant, about the size of a large potatoe will be sufficient; by this means a little dung will go a great way, and not any of it will be laid in vain, as every plant will have the good of it. This is a mighty ready way of transplanting; except the ploughing, it will not cost above 2s. an acre. The plants will be the better for leaning on one side.

sider. About March, if the mould be drawn up to the stems, they will be the better, tho' they may do very well without. I do not doubt but there are as many grains in a peck of rape seed as will set, at a foot distance from each grain, a hundred acres, therefore without doubt, there will be as many plants as would plant ten acres at the same allowance.

When the rape is reaped, sow turnips. This is getting three profitable crops, and part of a summer's fallow, in two years; and the two last crops are of an improving quality.

It is true, that I never saw this method put in practice by any other person. However I made trial of one acre in this way, and it proved an exceeding good crop. This experience joined to the reasonableness of the thing, makes it clear to me, that a farmer by this management, might make great profits of his land.

If it should be a busy time about Michaelmas, the transplanting might be

be deferr'd till the beginning of February, and keep the land fallowing all winter; it is a doubt with me but this is full as good a season as Michaelmas, and the land may be kept fallowing, as I observed. The spring planting, indeed, drives the crop a little later; but I am convinced, that there is no doubt of the plants growing, from either seasons: it's my opinion, that one in a hundred would not miss. I should be glad to see this profitable piece of husbandry put in practice, as reason speaks so clearly in its favour.

What a fine affair, for a farmer to make ten or fifteen pounds an acre of his stubbles, the land the better for it, and the expence not above three or four shillings per acre. If it should miss, the loss is scarce worth notice, and the land will be the better for the fallow at any rate. I assure my readers, I shall make a large adventure in this way, this year; and shall not fail, if God permit, to acquaint the public with my success.

The

The middling produce of an English acre of rape, is half a last; it sometimes happens that an acre will produce a last; but it must be very good. Cole-seed will very often produce a last, as the increase is something more than that of rape.

A last is ten quarters or twenty barrels, or eighty bushels Winchester measure.

N. B. The cloths for carrying the rape to the threshing-floor, are six feet broad, and eight feet long. To the two opposite sides are fastened two poles to keep the sheet stretched. Two men carries the sheet betwixt them, each man a pole on his shoulder; every two men must have two sheets, one to be filling whilst the other is carrying to the floor.

It is a piece of good management, and saves a year's loss of land, to sow rape on flax stubble, provided it can be got off before the last of July; the land must be twice ploughed and well harrowed.

M

C H A P.

C H A P. XV.

On the management of Turnips 'till ready for feeding Sheep on, with proper fencing to pen the Sheep on the Turnips when feeding.

TURNIPS are a very beneficial crop, and a great improver of land, particularly if they be eat on the ground with sheep.

In England, it is always allowed, that a good crop of turnips is as much profit to a farmer, as a good crop of wheat; besides they are an excellent preparative for a crop of barley and clover.

It may with great truth be said, that the land gets a fallow, a good dressing, and produces a valuable crop, and this, as I observed, all in the course of one year, and the expence of the seed is only six-pence. There is this advantage too, that any sort of land may be made

made to bring turnips by tillage and manure, or by paring and burning.

Begin to plough your stubble that is intended for turnip-fallow, in autumn; and gripe and water-furrow it, that it may lye dry all winter. Plough it again the first of March, and as often after as the weeds or grass begins to grow: about the twenty-fourth of June is the proper season for sowing it, a pound is sufficient for an Irish acre; observe to sow it when it is likely to rain.

Any manure that is intended for it must be laid on it before it is ploughed the last time, and then plough it in with a very thin furrow, that the turnips may have the benefit of the manure.

It is in any case wrong to bury manure too deep; harrow it well before you sow the seed; after sowing, roll the seed in, which is better than bush-harrowing. It is by much the cheaper and better way to take great pains in sowing them thin and even, than be at the expence of hoeing.

I may

I may be thought here to be wrong, for, says my reader, hoeing is of service to lighten the ground, and cut the weeds, as well as thin the turnips; but as to the weeds, it is much better to pull them up than to leave the roots in the ground to spring up again, which is the consequence of hoeing. As to disturbing the earth about the plants, I cannot think it of any service, as turnips love to have firm ground to grow on, and they are generally the best that turn and apple quite above ground, only trusting to one small leader, or root which strikes downwards: A forked root is never so good as a single straight one; and it is generally in light ground that these forked roots are found.

This is the reason why the English farmers recommend rolling in the seed so highly when sown, instead of harrowing it in.

I have often heard unthinking men say, that it was no matter how thick the seed was sown, as they intended to hoe the turnips, not considering that it

is

is from their very infancy that the dint of damage is sustained; for a turnip ought to spread the top round it, upon the ground, at the first coming up; by which means it will turn or apple very young; but this cannot be the case when they are sown thick; for, instead of spreading, they draw one another up tall, and weak; and, instead of appleing, the bottoms run up like parsnips.

This is the evil they fall into before they can be hoed at all; and, if they be drove late, the evil is yet greater; for the goodness of the turnip generally depends upon the good turn it gets when young.

When these tall weak aspiring tops come to be thined to eight or ten inches distance, their weak constitution cannot bear the sudden change, but droops their heads, and looks sickly, 'till kind nature, which has been busy in drawing up the top, descends to assist the root; this change however admits of delay, for certainly there is a
stag-

stagnation in growing, when they are stopp'd by hoeing, from running into the top, in order to supply the bottom; and a week's stoppage in growing, at this time of the year, is of great consequence, not to speak of the bad turn they get in appleing, &c.

What I have said may be proved, almost in every turnip-field, where chance has scattered a grain to an outside, &c. I say this, joined to the above reasons, will prove that sowing then without hoeing, is preferable to sowing thick with hoeing.

If this be the case, the expence of hoeing, which is very great, particularly by hand, is in a great measure thrown away. I would not be understood to condemn hoeing entirely, this would be going too much into the opposite extreme; but I should be glad to recommend such precautions and methods to the farmer as may save him as many hands as possible; for surely it will be allowed, that he is the best manager, who can raise the best crop,
with

with the fewest hands ; and the precaution of sowing turnip-seed thin, as that they may need little or no hoeing, is a great saving. Neither is it altogether the money that is to be considered, but the difficulty of procuring labourers who are hardly to be got for money at this busy season of the year ; for the hoeing of turnips always falls in harvest.

It mostly happens, that where people are strangers to a business, they are diffident in themselves, and, thro' a fear of underdoing, they often run into the other extreme.

About twenty or thirty years ago, turnips were not so general in England as they are now ; the farmers took great pains in hoeing them ; indeed they sowed them so thick on the ground, there was no avoiding it ; but now their eyes are opened, they have more sense than to throw abundance of seed away, to create themselves labour, at a time when they ought to be in the harvest field.

There

There is not a farmer in ten, now-a-days, that hoes his turnips.

As the land was either fallowed, or burn-baited, it is presumed there are not many weeds; and if there be, it is better to pull them up by the roots.

Of all the manures that can be applied to turnips, there is none equal to ashes, made by burn-baiting. Ashes is what they are very fond of; and they are larger and sweeter from ashes than any other kind of manure, which makes burn-baiting a valuable piece of husbandry for profit, and reclaiming sower coarse land, provided the directions under that article be kept up to; as the burn-baiting for turnips must be managed the same way as for rape. See page 68.

About the middle of December is a good time to turn weathers into the turnips; and an Irish acre of good turnips will feed twenty sheep.

Confine them to what they will eat in a week, and do not break a new piece before the old be clean eaten off.

Send

Send men with forks to fork up the bottoms or shells, that the sheep may come easier at them to eat.

There are several kinds of fences to fold sheep on turnips, such as sheep-bars, netting, and hedging; the most common of these in England, are sheep bars; they are the readiest shifted, and the best fence, and indeed the cheapest, considering how long they last. There is no ingenuity required in making them; the chief thing is to make them light and handy, so that a man may carry half a dozen on his back at a time; for, as they are often shifted, their own weight will break them if made clumsy.

Another fence is netting, but this is only for a country where wood is scarce. They are more expensive, and not so easy shifted, particularly in a hard frost, which often happen in turnip time. As posts or stakes are hard to be got either up or down, if the points of the bars only just enter the ground, so as to keep them from slipping,

N

ping,

ping, they are propped up behind with a forked stick, and will stand very well.

Where there happens to be sheep with horns, they are very apt to get intangled in the net, if it be not kept well stretched. I have known several lost by it.

The net is made of cording, about the size of a jack-line; the meshes are about four inches broad; a cord about half an inch in diameter, is run thro' the top of the net, and goes through holes bored in the top of the stakes or posts, which are set fast in the ground at five yards distance; the bottom of the net is tied with a pack-cord to the bottom of the stake, to keep it in full stretch.

I was once travelling through Scotland, and happened to be in company with a gentleman who had net-fencing for his sheep, but the frost was very hard, so that he could not get the net-posts up or down; he had just turned the sheep into all his turnips.

I told

I told him he would destroy half his crop, as the sheep would scoup the top and leave the bottom to hold water, which would soon rot them.

In short I advised him to make faggots, as he had brush-wood enough, and make one end broader and thinner than another, and set the broad-end downwards, leaning against each other, which, except a very high wind, will stand very well without stakes, make a good fence, and be great shelter. I happened to be again in company with the same person last summer. He told me that he took my advice, threw his nets aside, and stuck to the faggots; for, says he, they are the readiest and best fence that can be made use of; for half a dozen men will make a sufficient quantity in a day; besides, when the season is over, they are the better for firing. They who have brush-wood enough, would do well to follow the directions, its no matter how simple the means may appear provided it answers the end proposed.

As

As the sheep will, or ought to have their turnips eaten by april, they may be sent to the market; or, if you have clover, they will pay very well for keeping, till the latter end of May, as the markets is advancing till that time; after which you may lay the clover up for meadow, and have a good crop of hay.

In short, if a farmer manage his affairs right, by laying in his stock of sheep in a proper season, and buying what we call half-thicks, he need not doubt of doubling his money for them, and sell them off in April when the turnips are over; if he keeps them longer on clover, he may expect a farther advance, besides he is at no expence of harvesting, &c. and the sheep carry his crop to the market, and the land is well manured, cleared of weeds, and in good order, for two other profitable crops, namely, barley and clover.

Lay-land summer fallowed out of
the

the sod, is a sure preparative for turnips without any sort of manure.

Indeed summer fallow, for grass-land, is an excellent piece of husbandry, being the best dressing, land can have, and is sure to bring a crop of any thing, let the land be ever so poor aforetime, for the roots of the grass and weeds, or whatever has grown in it, being dispersed and mingled with the sod-part of the earth, when they come to be turned up to the sun, are stopped of their vegetation, by which means they rot, and are rendered a manure of the richest kind, every fibre is full of nitre, and enriches the particles of earth that clings about it.

It is a doubt to me, but for three inches deep in grass-land, there is as much bulk of fods and grass-roots, &c. as of mould, and if so, what a dressing must it get when rotten.

C H A P.



C H A P. XVI.

How to set Potatoes in drills, as in England, with the Plough.

I Shall treat of these different ways, as in England, for setting potatoes, but will forbear speaking of the Irish method of trenching them, as they are already too well acquainted with it, and I should be very sorry to introduce it into England.

The most profitable way I have tried is this.

Take any poor worn-out stubble-land, that is intended for fallow; plow it in autumn in two furrow-ridges, that is, lay two furrows back to back thro' the piece intended for potatoes. By doing this, it will lye dry all winter, and in the beginning of March (or sooner if the weather permit) harrow it across, and it will fill all the furrows level, after which, plough it, either across, or length-ways, no matter which,

which, provided the land be all cut and turned up, after which, harrow it well and fine; and just before you intend to plant potatoes, plough it into two furrow-ridges back to back, so that they must close at the top, but not so as to let any mould fall into the opposite furrow.

Being thus laid in ridges, the furrows will be all open. In every furrow set a row of potatoes, each about the length of a man's foot asunder, take the dunging-baskets and drop a piece on each potatoe as above, by this method a little dung will go a great way, and a few hands will set a great deal in a day.

When thus set and dunged, go with the plough, and split the ridge in two, so that what was the furrow will be the ridge, and the ridge will be over the potatoes; so that they will come up in rows through the middle of the ridges.

In summer you may go with the plough up and down every drill to cut
the

the weeds and earth the potatoes, by this method, it may well be termed a potatoe fallow, as it may be ploughed always when the weeds grow.

In taking them up, go with a plough and turn the whole drill over, by which all or most of the potatoes will appear above ground and be easy gathered. But if a small part of them remain ungathered, they will all be found by harrowing.

This is a very expeditious way both in setting, and taking up; and it ought to be every man's study to work his land with as little expence as possible.

The next easy way to set potatoes with the plough is in grass, viz.

Harrow the sod well, both length and cross-ways, to scratch and mangle the grass roots, in order to set them a rating when turned up.

Then begin and plough a furrow; in this set a row of potatoes, a foot length asunder; and on every potatoe drop a lump of dung; then plough
two

two furrows, and in the third set another row, so that there will be a furrow between every two rows or drills through the piece. When it is all set, harrow it well; but take care not to turn up fods.

When the potatoes are come up a little above ground, go with a plough up and down every drill, and lay the loose mould which the harrow raised, to the stem of the potatoes; but be careful not to disturb the sod. When they are taking up, turn the drill or furrow with the plough, by which means they are easily gathered.

The third method of planting potatoes, is with spades, as they do in Cheshire.

They dig all the ground, and bury the dung about four inches deep; after which they go with setting-sticks, make a hole and drop the potatoe in. Then they rake the ground to fill the holes. They are dug up with spades also; but

O

this

this is expensive, in comparison of setting with the plough. However they take care not to bury the dung too deep, as also to throw up any bad earth to spoil the land, which is too often the case in Ireland.



C H A P.

C H A P. XVII.

The management and use of Fitches.

FITCHES are a very useful crop, and particularly, a good winter-feeding for sheep.

Plough the stubble as soon as the corn comes off, and sow the fitches at the rate of twelve stone to an Irish acre, after this, harrow them well in; if they be sown at the latter-end of August, or the beginning of September, they will be ready to turn sheep into about the middle of December. Eat them all winter, and in Spring, the land will be in fine order for oats, or barley. Some chuse to preserve the fitches till Spring, to feed early lambs on, which is very profitable; others will eat them all the month of May, and then give the land a couple of ploughings, and sow it with turnips or rape at midsummer; this is a good way.

Others

Others again will fallow all summer and sow wheat on it. If you intend your fitches for seed, sow them in February, and harvest them as pease; but if they be intended to plough in for dung, which is the worst way, as it is better to make dung by eating than on the ground; sow them in March, and sixteen stone to the acre, and plough them in when full of blossom, as directed for buck-wheat. See buck-wheat.

If they are for fodder, by the way of hay, they must be mown before they are ripe, when the straw is full of juices.

Make them the same way as any other hay. By taking them thus green when the straw is full of sap, the grain does not shake out; the straw is sweet and good, and the horses eat straw and grain altogether, which is excellent fodder.

The quality of fitches is such that they will grow almost on any sort of land;

land; poor, gravelly, or light sandy land suits them best; for indeed they are mostly sown where nothing else will grow; and I think they exceed burnet or any other grass or crop whatever, except turnips for winter-feeding, as they suit our climates, being a native of these kingdoms.



C H A P. XVIII.

*On the different management of Clover
through all its variations.*

CLOVER suits the climate of Ireland better than any other grass-feed, and is a very beneficial crop, either for grazing or meadow; besides it is a great improver of land, having a strong fibrous root, which quickly incorporates with the earth; and when ploughed up or disturbed by tillage, it soon rots, and becomes a very rich manure.

This, together with the two rich crops it produces, makes it of more value than any other grass, either natural or artificial.

The way to make the most of it, I take to be this, viz. Sow it with a barley crop, that is to say, after the barley is sown and harrowed, sow the clover-feed, at the rate of sixteen pounds to an Irish acre. When sown, either bush-
har-

harrow or roll it; but the latter is the best. When the barley is reaped, eat the clover for about a month. There are many who object against this method, (but my reasons for it, may be seen under the title of remarks): then lay it up; it will be well grown by April, at which time turn in the ewes and lambs. It is an excellent thing to create milk for feeding lambs with.

It is also good for feeding any sort of cattle; but be watchful to keep your horned cattle walking about, or they will be very apt to burst. It is a very swelling food, and particularly if the weather be wet; and when cattle are first turned in, they eat greedily, not taking time to chew it; therefore it is best only to let them be in about ten minutes at a time at first.

It may be eat 'till the middle of May, and then laid up for meadow or feed. If mown for hay, it will be ready to cut about midsummer.

Mow and harvest it as other hay, but beware not to make it up too green,
left

left it fire, as it is very full of sap or juices.

If the clover be intended for seed, the first growth must be eaten down. It will indeed produce blossoms in plenty, but little or no seed of due strength or consistence.

It is therefore the safest way (if the farmer intends to save the seed) is not to eat it in the spring, but to lay it up early for meadow, and it will be ready to mow the latter end of May, and the second crop will produce the seed. Let the seed be very ripe, for there is no danger of its shedding, whereas if it be not ripe, it will not thresh.

The seed must be threshed out of the straw, but it will not part the pods or husks without great labour, which makes it very necessary to have it shelled in a mill, partly in the nature of oats.

The clover that is intended for hay, must be mown when full of blossom, which is the time it is in its greatest perfection for a hay crop.

Tho'

Tho' I said it was to be sown with barley, without taking notice of any other grain, yet it is not in barley alone that it may be raised; for it may be sown with success amongst oats; also if wheat or rye be sown in broad ridges, it may be sown amongst it in May, and rolled in.

I have seen good clover where the seed was sown amongst flax; but the best of these crops for raising clover is barley, as this grain is not apt to grow with so long and gross a straw as oats, wheat or rye; therefore the clover is not in equal danger of being smothered. Yet there is no general rule, without an exception, for I have seen good and bad clover among all those crops; a deal depends upon a good season, and the land being properly tilled. With barley, however, it has the best chance, as we generally till the best ground for a barley crop; as also pulverize it the finest, barley being a tender grain, and requires good tillage.

P

C H A P.

C H A P. XIX.

On Lalucerne, its perfection and management.

LA LUCERNE, so called by the French, but Lucerne by the English; is a very profitable grass, and particularly in some countries, where the climate is hot, and the land light and sandy, or gravelly and rocky.

It is an excellent food, either as herbage or hay; but its greatest perfection is for soiling of cattle, in summer time, which makes it of great service in some parts of England where there are few inclosures, and where grass land is scarce, insomuch that the farmers have no place whereon to turn their cattle, except on bare commons already over stocked, or tether them on the end of a ridge, in an open corn town-field.

I say in such places, I do not know any one thing that would turn out to
a greater

a greater advantage, or be a more useful crop than lucerne; for in such places, let a man's stock of cattle be what it will, he cannot lay his land down for pasturage; as supposing the town-fields to be four or five hundred acres, he will not yet have above two or three ridges in a place; he is therefore obliged to concur with his neighbours in the point of farming, not having it in his power to lay his land out for grazing; but as there are scarce any persons in the said towns, but what have an orchard, or a croft at the back of their houses, they might sow lucerne on their ridges in the open fields, and keep what cattle they please, by soiling them in their croft; and a great advantage they would have in saving the dung too, a very material consideration in those corn countries.

The case in Ireland however, is quite different, as there are few who hold land, but what have it to themselves, and mostly inclosed; therefore they seldom want grass in summer, and consequently

frequently need not plough up their lands for that purpose. Moreover the lands of Ireland are naturally given to grafs.

Therefore I look upon clover to be, by much, the better crop; for tho' it does not laft fo long in the ground, yet it lafts long enough to fee the natural grafs up; and what is it we fow artificial grafs-feeds for, but to fupply the defect of natural grafs, or rather to keep the land in profit 'till the natural grafs recovers its root, which has been damaged or deftroyed by long tillage; and, by the time it is re-eftablifhed, we fuppofe ourfelves nearly repaid for our want of the natural grafs, which will, in this graffy country, regain a fufficient footing, by the time that the clover is worn out, which is in three years.

But further, lucerne is not fo early a fpring as clover; tho' I have heard it argued that it was. But reafon fhews to the contrary; for, let us only confider that it is the fun we may thank for nourifhing the earth, and who makes her

her send fourth her early spring; now it is unquestionably the surface that first feels the effect of the warm rays; therefore, any vegetable that roots shallow, will make the earliest shoot; consequently lucerne must have the more backward spring, as it strikes a great deal deeper than the clover.

I would further observe, that clover improves land better than lucerne, by its root spreading more largely and plentiful through the sod.

I am strongly of opinion, that nothing in nature improves land equal to the root of clover; for if it only lies one year, plough it up, and the furrow or sod will be a perfect matrafs, and by ploughing it up, the root soon rots, and becomes the finest manure upon earth; but this we cannot say for lucerne; for tho' what root there is may make good manure, yet it does not spread, or produce half so much sod, as it strikes downwards like a parsnip, and a great deal of it lies too deep to be raised by the plough.

The

The two chief perfections that attend lucerne consist, first in its yielding a plentiful produce, tho' sowed in a poor, sandy, gravelly or rocky ground; its next advantage is for soiling cattle; which, as I hinted before, is useless in Ireland; as I hardly think any one would be at the expence of men to cut and carry soil to his cattle, when he has good pasture fields for them to run in and help themselves; beside cattle never thrive so well when penned up in a small pasture, as when they have room to rake over.

In short, there are so many arguments in support of clover being a better and more suitable crop than lucerne, especially for the lands and climate of Ireland; that, on experience, it must always be found to have the preference.

Every farmer hower, is the best judge what sort of land he has, or situation he is in, and accordingly may suit his crop thereto. When a person hears two tales told, tho' he be a stranger
to

to the affair, yet he may give a shrewd guess which is the most likely to suit his purpose.

The management of lucerne is nearly the same as that of clover; namely, to be sown with any sort of corn in spring, but barley suits it the best.

It is necessary that the land should have a good summer fallow; when the barley is sown and harrowed, sow the lucerne and harrow once in a place with the harrow turned the wrong end foremost; and when the corn is come up, roll it. If the lucerne be intended for summer pasture or meadow, sow it the broad-cast way, and in order to sow it even, sow it twice in a place. Take no more in your hand than you can hold between one finger and thumb. On a ridge that is twelve feet broad, make three casts; this will sow at the rate of six pounds to an Irish acre, which is its due.

If the lucerne be intended for soiling cattle, it is by much the best to sow it in drills, viz. two drills at eight inches

inches asunder, and then an interval of three feet, and then two drills more, and another interval of three feet; and so on through the piece.

It may appear to farmers that are strangers to the drill husbandry, that it is a very nice affair, and not to be done without the expence and nicety of a drill plough; nor did I ever read any instructions that directed it to be done by any other way: but be assured there is nothing more easy, for a common plough will make a very good shift, when managed in the following manner, viz.

The land being well prepared for the seed, if lucerne is to be sown alone in drills, begin to plough at one side of the field, and plough a furrow two inches deep, and in this scatter the seed; then plough another furrow eight inches broad, and two deep, and in this also, scatter the seed; then plough five more, and in the sixth and seventh scatter the seed; so go on, leaving five
furrows

furrows unsown, and two sown through the field.

As soon as the lucerne is above ground, go with the plough and lay a little mould at the stem of each row; and always when the weeds grow, plough a couple of furrows in the wide interval which will kill the weeds, and fallow the ground, and give additional vigour at every ploughing to the plants.

If lucerne is to be sown amongst corn, it cannot be set in drills as above with the plough; therefore stretch a line at the same distances, and shake the seed along it, and harrow it in, as if it was sown in the broad-cast way; and as soon as the corn is cut, plough the wide intervals, and hand-hoe in the narrow spaces between the two drills. There can be nothing more easy than drilling and horse-hoing in the above manner, which may answer the end by sowing any sort of grain, and particularly wheat, beans, and pease.

Instead of a drill-box, or hopper which is used in ploughs, take a tin porringer and punch three or four holes in the bottom, just the size of the grain or seed you have to sow; by shaking along the furrow you may bring yourself to a tolerable degree of exactness, and swiftness too; for one man may sow as fast as a plough will go.

The time to mow lucerne is when just beginning to flower.

Avoid making the hay too green, for it will appear to be dry when it is not, therefore may give again, and damage.

When it is cut for soil, there is nothing more than to cut the oldest first. It may begin to be cut when six or eight inches high, and so continue cutting as it is wanted.

In order to assist the farmer in being a judge how much corn to sow on an acre in the drill husbandry, I shall lay down proper directions.



C H A P.

C H A P. XX.

How to manage Saintfoin, and its perfection.

I AM now come to speak of saintfoin, which is a very valuable crop, and by far more suitable to Ireland than lucerne; and tho' in general clover is the best crop I can recommend for the lands and climate of Ireland, yet there is no doubt but others may answer in some places, for there are some lands in Ireland that would suit better for saintfoin than clover.

This is where the lands are subject to rocks and stones, which makes meadow very scarce, tho' the summer herbage is good and plentiful, as the soil amongst these rocks is naturally good where it can be cultivated so as to be brought to any tolerable tilth.

Sow saintfoin, and if the soil be ever so scanty, it will strike into every small niche or crevice, and seek
its

its nourishment very deep, where no other grafs will live, or indeed, can get a footing.

It is alfo good for foiling cattle, but in this lucerne has the advantage, as it is of a quicker growth, and lefs stagnated with cutting; but, as I before obferved, this is of little fignification to Ireland, as it abounds with good fummer herbage: it is winter feeding that we are to confider, as alfo to keep the land in full profit 'till the return of the natural grafs, after long tillage; and this is beft effected by the two graffes of clover and faintfoin; clover for the better and fmoother land; and faintfoin for the fandy, rocky or more ftony parts thereof.

As I have, in a few words, given the virtues of faintfoin, I fhall in much lefs give the management thereof; as there is little alteration to be made between the raifing of faintfoin, and lucerne, or clover.

Saintfoin muft be fown earlier than clover, or lucerne, as it is in lefs danger

ger of being hurt by the frost. The land must be well tilled, whether it be sown alone, or among corn: if it be sown amongst corn in the broad-cast way, harrow the ground once in a place, after the corn is sown, before the saintfoin is sown. This will make the ground a little level, that it may not be buried too deep in places. Yet as it is a large husky seed, it must have a covering or it will not grow; but, by being harrowed in when the land is pritty ruff, it will be all covered.

If it be sown in the drill way, along with the corn, stretch a line and scatter the seed along it, leaving intervals, the broadest three feet, and the narrowest eight inches, as directed for lucerne.

If it be sown by itself, it may be got into the ground by the first of March.

Some will sow it at Michaelmas, but I do not think this a good time, for it will not be a great deal earlier, beside a severe winter may hurt it; and it is further to be considered, that by keeping it out of the ground 'till spring,
the

118 *The Yorkshire Farmer,*

the ground can be winter fallowed, which will add a great fertility to the soil.

If it be sown in drills, and alone, sow it in every sixth and seventh furrow, as directed for lucerne; but have a care, not to cover it above an inch deep, at the most. Six bushels of seed is generally used to an acre in the broadcast, but one bushell in the drill-way, is full enough.

Lay up the saintfoin for hay about the first of March, and it will be in blossom about the first of June; when it is full in flower, it is time to mow it; manage it in making, as clover. Observe in eating it with sheep, not to eat it too near, which will damage the root.



C H A P.

C H A P. XXI.

On Ray-grafs, its perfection and management.

RAy-grafs is a native of our own kingdoms: its quality is fuch, that it will grow in almost any kind of land. In cold clay, or wet land it flourishes greatly; it will also grow well on high, dry, or sandy land, which is very extraordinary, as the two opposite extremes are so great. It is not nice, for it will grow amongst any sort of grafs; it will also incroach amongst corn, but while it is stealing its footing there, it is deemed a weed, and is known by the name of darnill. It flourishes greatly by culture, and will grow to the height of four feet, upon good land. The seed also grows large in proportion, and full of meal.

There are two sorts, one called droke, and the other darnill. They are both of nearly the same quality: there is no know-

knowing the seeds asunder, they are so nearly alike; the droke has a little larger or fuller grain, and I think is something more delicate in its growth, for it generally flourishes best in tilled ground, amongst corn. It produces a far greater head of seed than darnill. I have counted a hundred and thirty five seeds in one ear. The ears of droke and darnill differ considerably. That of darnill, or ray-grass, grows close to the stalk in two rows, not much unlike rye; but droke has a spread ragged head, of many branches of five or six inches long, spreading from the main stalk, on the end of which branches, the seed grows in bunches.

There is the same distinction to be observed in white common hay-grass; for tho' the root, stalk, and seed, are nearly alike, yet the ears differ, some having an ear like darnill, and others having a loose open spread ear, like droke.

The greatest virtues of ray-grass are its early growth, and its good quality
of

of growing on any sort of land. These two excellencies should induce every farmer to provide himself with some of it. There is no farmer but would be glad of a piece of early grass to feed lambs on, or if he had not lambs, to turn in his cows that are generally dropping their calves in the spring or early season, and would hereby also be greatly forwarded in their milk. It is also excellent for recruiting calves and foals who have hardly escaped the severity of the winter.

In short, a few acres of ray-grass would be of more value to a farmer, than he can well conceive; and when his natural grass pasture comes to a head, he may lay up his artificial grass-land for hay, and not doubt of a good crop. Ray-grass is also wholesome feeding to mix among clover.

However tho' I have said so much in setting forth the advantages of ray-grass; yet it is not without its fault, and this is, its being an impoverisher of land, tho' not in a very great degree; for a crop of ray-grass, with the

R

land

land laid down in heart, will hold good for ten or twelve years.

Your best œconomy is to mow it one year, and graze it another, alternately; and tho' it may be its property to reduce land a little, I do not think a farmer can sow a better crop, provided he does it with discretion, and sows it on his strongest wet clay land, or where clover will not succeed so well.

But where clover will thrive, it is surely preferable to all other artificial herbage; and if I recommend ray-grass, it is only for about five or ten acres in a hundred.

The culture of ray-grass is very simple and easy. It may be sown amongst corn with any sort of grass-seeds, or by itself.

If it be sown with clover and barley, which is the best management, sow three bushels on an Irish acre; but if it be sown alone, six bushels is the compliment, and so in proportion for an English acre. The old broad-cast way
is

is the best way to sow it; for which chuse a calm day.

It may be sown with the corn, for it will take as much harrowing, being a light feed. Neither is there any fear of burying it too deep. On the other hand it will grow if it lye above ground.

Where grass-land, of any sort is too thin, ray-grass, or white hay-seeds, may be sown on the surface, and rolled, and they will grow the first rain.

The greatest care must be taken to mow ray-grass in the proper season; if no regard be paid to the seed.

The time to mow it is at the first shooting of the ear, when it is full of sap, but if it be for seed, let it stand till the ear begins to turn brown. There is a medium however, to be used between both, and that is to mow it when the ear is full, but the seed not above half ripe; by this a good deal of juices are catched in the stalk, and the seed ripens and hardens as the hay is making. It will be small but sound,
and

will grow very well ; it must be threshed like corn, and the hay will be no worse but better for threshing. An acre, plantation measure, may produce upwards of fifty bushels of seed.



P. A. H. C.

C H A P. XXII.

How to reclaim Bog and Mountain, with proper seeds to sow on them.

I Doubt not but there are a great many people would be reclaiming bog, if they knew how to set rightly about it, and particularly if they knew how easy it is to be done, and the value thereof when reduced; for, if suited with proper crops in a good bog, perhaps the first crop may more than pay the whole expence of reclaiming.

A great mistake in draining bog is in making the drains too large, and too few of them, by which the expence is augmented, and the bog not effectually drained.

I have found, by repeated experience, that a drain of six inches wide, at the bottom, and ten at the top, is sufficient to drain the wettest piece of bog from any down-fall of water; and there is seldom any ground spring in bog;
and

and if there be, this is sufficient to take it off.

Fence drains, I set no bounds to, as every one is the best judge of what will turn his cattle.

If you intend to drain bog, first cut a head drain at the edge of the bog, where the best fall for water is, cut it three feet at top, and half a foot at the bottom, being a depth sufficient to take off the water. Confine the water to a narrow channel, by which means it will keep its course clear, and a drain will last longer without scouring or cleansing out; which, on the contrary, if it be wide at bottom, the water runs with a thin sheet and a slow motion, so gives the grass and weeds an opportunity to grow, and when they once get footing, the drain is soon choaked up with the stoppage of every stone or stick as well as the grass.

The head drain being thus made, lay out the fields as long as the bog will admit; but not above six or eight perch wide; make the side drains two feet

feet wide at the top, and bring them to nothing at the bottom, then look over the field, and find out all the low places and bog-holes where the water stands: from these cut small surface drains eight or ten inches wide, the shortest way into the side or head drains.

These small drains are cheaply and quickly made, and are quite sufficient to carry off the water, so that the men may stand dry to dig.

Being thus drained, lay out the ridges thirty feet broad, cut them straight with a line, for it looks very slovenly to have crooked furrows, and they are no easier made than straight ones.

Begin with spades, and throw the ridges high in the middle, and let each side have a gradual descent.

Nine inches, taken from each furrow, and half-way up the side of the ridge, which when thrown on the middle, will give it a rise of about eighteen inches; bring the furrow to nothing with an even slope, having no sharp
edge

edge from the bottom of the furrow to the top of the ridge.

Land layed in this manner has no need of any but head drains, for every furrow is a drain to the ridge it belongs; if it be a black bog, by no means bury the upper sod or turf that is covered with heath or any sort of rough grass, &c. which is fuller of salts and sulphur than ten times the bulk of the under turf.

This upper sod must be cut as thick as reason shews it will burn, in order to raise all the ashes possible, the more the better; but the ridges must be thrown up before they are burnt, the better to warm the bog, and to preserve the ashes from being any of them buried.

About May, or as soon as you find the fods are dry, and will burn, make heaps of about a cart load in each, at a proper distance all over the ridge, in order to give the bog all the advantage of heat you can, which heat is of great benefit, as it sets the bog a working,
by

by which means the particles thereof are divided and become a kind of manure to itself. I look upon the heat to be of as great advantage almost, as the ashes; for I have observed this to be the case in burn-baiting, in the place where a heap of fods have been burned; and tho' all the ashes were taken off and even some of the earth pared away, yet the place where the heap had been has had the best corn on it, and it is plain it got no other advantage from the burning, but the heat.

When thus burned, and the ashes spread, which ought to be finished by the twenty-fourth of June, sow the turnip seed very thin amongst the ashes; and, as no horses can come on the bog, draw a light roller over by men, by the pressure of which tho' the seed will not be well covered, yet it will grow very well, particularly if there happens to be a shower of rain soon after.

There is no need of hoeing the turnips, as that would help to lighten the
S bog

bog too much ; for the lighter the soil the worse, and this would add to the evil.

Eat the turnips on the bog with sheep, the urine of which greatly adds to the fertility thereof, and gives it a thorough dressing, besides the trampling of the sheep will in all probability sadden it, so that horses may go on it to plough the succeeding crop.

But it must be ploughed very thin, so as not to bury the ashes or sheep's dung above two inches at most ; also take care not to turn up any bad or unimproved bog, for certainly the afore-said manure would have more advantage over four inches thick of bog, than twice the quantity, and four inches is as deep as any corn strikes downwards.

At midsummer following, sow the bog with rape or cole seed, at the rate of one peck and an half to the acre, Irish measure.

After sowing, roll it in, if you find the crop be forward and good, eat it
with

sheep, which will give it another dressing; besides bog will bear eating very well, for the rape will keep growing in the winter, it being not so subject to freeze as up-land.

The beginning of June following, the rape may be threshed, and another crop of turnips sown. This will make two crops of turnips, and one of rape, which will a great deal more than pay for reclaiming the worst bog in Ireland, as these three crops at a moderate computation may be worth twelve pounds an acre, and by chance twice that money.

Whereas digging, draining, and burning, by the above directions would not cost above four pounds an acre; but, if it was where it is level and free from bog-holes, it will not cost near that money.

When the turnips are eat off, which ought to be by the first of March, sow it either with rye or oats, but rye to choose, as we may now suppose it to be very rich and well reclaimed.

Above

Above all things sow the seed very thin, or it will be all straw, but little corn, six stone of rye on an acre, or ten stone of oats is full sufficient.

About the first of April, sow clover and ray-grass, or instead of the latter, white hay-feed, which may do as well.

Sow nine pounds of clover-feed, and six bushels of ray-grass, or hay-seeds, on an Irish acre, and so in proportion for an English one.

When sown, roll it in; and observe never to alter the ridges out of the form or position they were first laid in, by digging: always preserve the furrows in the same place. Keep the furrows and drains open, to let no water stand, which would soon wash the manure away, having a ready passage out of this loose open soil.

It is a bad piece of husbandry to mow bog until it has been first graz'd a year or two. See Remarks.

C H A P.



B O O K II.

C H A P. I.

Remarks on reclaiming Bog and Mountain, and on Agriculture in general.

A monthly Calendar to remind the Farmer what works are to be done as they come in season throughout the year.

Several cuts of Machines and Tools for dressing Flax, &c. &c.

IT is an old English saying, That bought wit is good, provided it be not too dear; but indeed, I paid a little too high for my experience in rating flax in lime-stone and deep water.

Lime-stone water never fell in my way but twice, once in Ireland and once in Wales; in the first, I had my choice of two sorts of water, namely lime-stone and bog, the latter was inconvenient, but the lime-stone water was very near me, being a fine standing
pool

pool under a lime-stone quarry. As I had never heard any thing against such water for flax, I had well nigh determined with myself to water in it, but on second thoughts, as I was not necessitated, my flax was too good to be risked by experiments, therefore I escaped for that time.

In Wales, however, I had not the same good fortune, tho' I did not run into the tryal designedly.

Through my land run a small rivulet which traversed some low meadow-fields; in two of these fields, I made in each a flax-pit, by the side of the river, which I could fill at pleasure. At a small distance, was a lime-stone quarry, out of which came a spring, which helped to feed this rivulet: one of the pits was opposite to the spring, and the other above it, so that I could turn the spring below both the pits, which I accordingly did into the rivulet, thinking myself well provided with water. Into each pit, I put four acres of good flax,

flax, foddred and treaded as usual, but whether for mischief, or what I cannot say, some person opened the dam that was opposite to it; thus they served me three nights successively; it had been seven days in the water when this happened, but scarce begun to rate, as I tried it every day.

I immediately found the bad effect of the lime-stone water; I took it out the fourth day after, being in all in the pit only eleven days. But it was quite spoiled and rotten, except some bits in the middle of a sheaf, or in the corner of the pit where the lime-water had scarce reached; and this was green and nothing better for going into the water.

In short, it was spoiled to such a degree, that I never made use of a handful of it. The flax in the other pit that escaped the lime-water, lay there five weeks, and got a sufficient rate, and was so good, that I sold some of it for sixty-four shillings a hundred weight in the rough.

This

This shews what difference there is in water; for I had water in the same land that watered flax well in twelve days; and I have had water in other countries, that has rated flax well in six days.

But my experience of deep water cost me yet dearer, as I lost upwards of two hundred pounds worth by it in one year, for the quantity was very large. This was in Cheshire, where marle pits are very plenty, and some of them very large and deep.

I always knew that flax never rated kindly in deep water, but never so fatally experienced it as here. The surface is warmed by the sun, and will set the upper part of the flax a rating two or three days before that which lay four or five feet deep. This is one great reason why it is so necessary to tread the flax in the pit, in order to mix the water, that it may rate even.

The water in these marle pits in Cheshire, are very good for rating flax
or

or hemp, where they are of a moderate depth, but they are often from six to fifteen feet deep.

By a mistake in a direction, I had seventeen large waggon loads of choice good flax put into one of these large pits, the consequence of which was, that I in a manner lost the whole. But indeed this was not the only time I suffered by deep water.

It is much the safest way to make pits to a proper size, if there be none by chance that are suitable.

In Lincolnshire, it is very common for labouring men to dig pits on the commons, and let them to farmers at so much a year, for rating flax in; not but the farmers have the same privilege of making pits, but they may buy them from a poor man cheaper, as he makes them at spare times, when he has no other work.

They will sell a pit that will hold seven or eight acres of flax for three half crowns, and so in proportion.



T

CHAP.

C H A P. II.

Remarks on Seed-flax.

THERE are several reasons to be given, why the seed flax has not a right to be so good as white flax, or such as is watered with the seed on.

First we are to consider that flax-seed is of an oily nature, and that this substance is conveyed thro' the skin, or bast (as it is called by some) up to the seed, and as it is on its journey (as it were) dispersed thro' the length of the stalk, it is pulled for white flax, by which it catches the oil in the skin, where it remains, instead of reaching to the seed.

The intent of watering or rating flax, is to rot the stalk, in order to make it part freely from the skin, when dressed, as also to soften, purge, and cleanse, or discharge any unkind harsh matter from the flax, but the oil being so stagnated, preserves the flax from rotting
in

in any reasonable time, not letting the water have the power over it, as it has over a poor substance; and were it possible to extract all the oily substance from the flax, it would leave it as poor as the stalk whereon it grows, consequently to rot in the same time, and be rendered as useless.

This confirms my former opinion, that the less quantity of water the flax is rated in, the better, and the stronger it is made, by the oily substance which it is permitted to retain; for the best particles gather and cling to the strongest body, being the flax, which makes it weigh heavy, adds to the strength, and makes it of a kind soft, silky nature. I am confident, were a parcel of flax-seed thrown into one of these pits, for some considerable time before the flax was put in, that it might have time to incorporate with the water, that it would have a happy effect, and considerably add to the goodness of the flax.

I do not say that it would be worth while to do this, further than by way of
of

of experiment and proof. I have thrown flax-seed-chaff that has had some light seed amongst it, into a pit, and found it to be of service.

An old pit that has had flax watered in it several years, is far better than a new made pit; and one that has white flax with the seed on watered in it, is better than one that has been used for bunch-rate, or flax that has had the seed taken off. All this I have seen experienced by others, as well as myself.

Now, seeing it's so absolutely necessary for the good of the flax to preserve this oily kind nature in it, in order to keep it from rotting, and make it kind, soft and silky; what a piece of absurdity it is to drive it out by drying it over the fire, as is universally practised in Ireland? It renders it harsh and brittle, so that it looses considerably in its real weight and goodness, and thereby loses in its value.

In order to be convinced of this, weigh as many sheaves as will, when
broken

breaked and swingled, make two stone, one half of which dry over the fire, the other half dress without, and it will be found that when both are dressed, the difference in weight will be from a pound and a half to two pounds; a great loss in so small a quantity of flax.

The English flax-farmers are so sensible of the real evils that attend drying it, that they will not suffer theirs to be dryed in the sun. It is true, when it is taken up off the grass it is dry, tho' some choose to take it up in an evening when the dew is falling.

No one that is not necessitated will offer to dress any flax 'till it gets a sweat in the mow or stack, which adds to its soft silky nature, as well as weight; and after this sweat, it is never suffered to be dryed in any case.

But then we are to consider that the English flax-farmers are true judges in rating their flax; which, if not done properly, it is hard to be dressed even with fire, and much more without.

They

They have also other kind of tools to brake and swingle it with than any in Ireland. The quantities that are raised in England could never be manufactured in such a paltry manner; also, were fire of no real damage to the flax, it would add so much trouble and expence of drying, &c. to a farmer's other business, that it could never be duly attended to.

One acre managed in the Irish manner, would give as much trouble as an hundred would in the right English method; for when it's once in the barn, it is scarce of as much trouble as corn, having no more to do than agree with men to work it, and this is mostly a set price, except it misses of a good rate, (which may sometimes, though rarely happen) or if the flax be very short; in this case, there is a consideration of an higher price; but the common rate for dressing white-flax, is fourteen pence a stone, for breaking and swingling; and sixteen pence for seed or bunch-rate flax.

High

High or low wages is made according to the cleverness of the workman, from the difference of a shilling to three on a day, for there are several degrees of workmen: a good workman is as well known through the flax countries of England, as a justice of peace or sheriff in an Irish county.

It is necessary that a farmer look over his swinglers sometimes, to see that they make no waste; as also that they dress it clean, for on this his success and sale in the market depends.

Some work-men will make the same flax sell higher than others by six-pence or eight-pence a stone, and all the flax buyers know the good work-men by the lapping or making up of the flax. A good work-man is seldom made, if he does not learn when young, it is far easier to make a good hackler than a good swingler, tho' the former is a trade of apprenticeship, and the latter is not.

The swingler generally has a pair of scales by him, and weighs the flax as he

he dresses it, then takes it into his master, who weighs it, till he gets two or three packs together, to take to the market.

A great deal depends on giving flax a good even colour for fetching a good price in the market. Let the colour be what it will, it ought to be of one sort; not to be striped or spotted with black and white, or green and white, grey and blue, or green and yellow, &c.

The misfortune of these mixed colours is got before it goes into the water, particularly if it be seed-flax of any kind; for the prevention of which, I ordered seed-flax, in imitation of white, to be stacked with the seed-end outwards; this prevents the out-sides of the sheaves from being weather-beaten, which will turn them black or grey, so that it will always be of a quite different colour from the inside of the sheaf, but the seed being outwards, can take no damage, but will ripen or dry the faster for it.

If

If the bunch-rate flax get a mixed colour, it is for want of spreading it even and clear of lumps after the pullers, the same evil the dew-rate is subject to, if not properly spread; but it may happen to white flax two or three ways.

First, when it is pulled, if it stand too long to dry before it is put into the pit.

Secondly, if it be not well and close covered with fods and duly trod.

Thirdly, if it be not spread clear of lumps when out of the water: all these are cautions a farmer ought to be armed with.



U

C H A P.

C H A P. III.

*Remarks or Explanations on reclaiming
Bog and Mountain.*

I Hinted, under the article of reclaiming bog and mountain in the foregoing book, that bog ought not to be mown for hay, for the first year or two; after it is laid down with grass-seed; the reasonableness of which I most humbly conceive, will appear from the following remarks, viz.

The meadow of bog, particularly before it has been eat, throws up a tall, slender weak grass, the stalk of which is not able to support itself upright, but doubles, or as it were, kneels upon the second or third joint, so that when it is mown it turns up brown at bottom, and looks as if it were dead; and indeed, it is far spent, for the nature of the soil is of such an open porous weak quality, that it gives the sun great advantage to exhale the nitre or
vir-

virtues of the earth which nature conveys through the verdure or blades of the vegetable creation.

I say, that bountiful nature, thus assisted by the nourishing rays of the sun, goes on at a vigorous rate, 'till she has exhausted her stores, by the first vigorous onset, has robbed herself of those juices whereof some part ought to remain for futurity; and has been so active in throwing her favours upward, that the fibrous parts of the roots, which ought to grow and incorporate with the earth, have been robbed of their supply.

This is certainly the case also with corn that grows on this open loose earth, it never feeds, or fills well, by reason it exhausts all its strength in the first onset; for the soil or mould being so loose about the roots, gives the nourishing particles too free a communication.

It is not because there is more nitre or richness in a strong clayey soil, than
this

this sort, that makes the corn be bolder, or fill better; no, this cannot be; for certainly there are more of such qualities in a dunghill than in a strong clayey soil; yet the latter will produce corn, when the former will produce nothing but straw.

For the strong land is firm, close and solid about the roots, so that the fibres thereof take in their supply of nourishment more gradually, and do not let nature overshoot herself.

I am pretty certain, that this weak, light loose soil throws up as much refined substance into the straw as, were it proportionably divided betwixt straw and corn, would produce corn with as full a body as other land.

But, could it be so contrived, this dividend should be by gentle, and proportionable checks in the growth.

This makes it necessary to eat reclaimed bog with sheep; which, by continual cropping the branch, as it springs, it checks the growth, and makes the

Remarks on Bog and Mountain. 149

the roots strike downwards, spread and incorporate, with the earth, and also causes the stalks of the grass to shoot out fibres, and spread over the surface; beside the trampling of these light cattle, saddens the ground, and helps to bring it to a solid body.

This shews how assiduous we ought to be in employing all our industry and ingenuity to help the works of nature, by rolling and ploughing at a proper depth, &c. in such land as reason points out to want our assistance, and also to suit the constitution of such lands with seeds or grain best fitted to their nature, in order to raise every crop to the best advantage.

As for instance, a good and profitable crop of either turnips, rape, or cole-seed, may be got from such reclaimed bog or mountain as above, and at the same time the soil improved to an amazing pitch of fertility; whereas, if it was sown with any sort of corn, it is a wonder if it would be worth rap-
ing

ing; straw it will produce, but corn very little, and what there is will be little better than what we call hen-corn, namely, small and bad. This I am convinced of by personal experience.



C H A P. IV.

Remarks on Agriculture in general.

IT is a very ill judged piece of husbandry to plough some sorts of land too deep, for several reasons, viz.

The best of the soil being the upper stratum, is buried, and the under stratum being the worst earth turned up in its place.

Secondly, there is double the quantity of soil to enrich, for certainly it will take as much more manure to enrich a furrow eight inches thick, as one four inches thick, besides it takes more labour in ploughing, &c.

Thirdly, these four or five superfluous inches are lost, being of no use; as corn never root, or at least ought not, above four inches deep.

Fourthly, corn never ripens so early or kindly, on loose, deep earth, as it does when it has a firm sole to grow on.

The

The four or five inches of superfluous loose earth is soaked with water, and rendered like mortar, which being out of the reach of the sun to warm, in any reasonable time, keeps the corn cold and chilly, lying at the roots, as it were, like a sponge; indeed, it will give straw, but the corn never ripens kindly, having a thick weezen'd skin, but little substance.

I have heard people endeavour to support an argument in favour of deep ploughing, by saying they have traced fibres ten or fourteen inches deep; this I grant might be the effects of deep ploughing, as it loosened and enriched the under stratum, by which means it encouraged the roots to strike downwards into a deep cold climate, as it were. This is one strong reason why deep ploughing ought to be condemned, as it encourages or intices the roots out of their own natural warm richer earth, being the upper stratum, into a deep, cold chilled earth, which is the effect of a thick skined, poor starved grain, and

and a late harvest; whereas on the contrary, if the under stratum was kept firm, and unmolested, the water would be obliged to return into the furrows, trenches, and drains, having little or no admittance into it, and the roots, instead of striking downwards, would run horizontally, and keep in a warm rich soil, being near the sun, to nourish and warm the plants, and the earth about them.

It should be the farmer's chief care, to assist nature all in his power, in order to get his harvest early, before short days and bad weather come on.

Tho' reason joined with experience, proves that deep ploughing and trenching, as above, is useless, and in a great many lands and places, of bad consequence, yet there are lands and climates that may agree with deep ploughing, which I shall endeavour to point out to my brother farmer.

In the south of England, for thirty or forty miles round London, the climate

X

is

is very warm, and the harvest, at least, six weeks earlier than in Ireland, or the north of England.

There is nothing more common than for labourers to go from those places, reap the harvest in the south of England, and be at home soon enough for their own harvest.

This shews the material difference there is in these climates; then why should not different management be necessary?

I do not doubt, but deep ploughing in this warmer climate may be useful, for by ploughing and throwing the dung or rich particles of the earth deep, it draws or intices the roots downwards into a cooler, moister climate, which perhaps, may be a better situation than to lye too near the surface, to be scorched by the sun, which is more intense in the south of England.

There is also some lands in the south of England, particularly in the oile of Ken, in Kent, and in some places down along-side the river Thames, which consists

sifts of a deep rich lome, so that let a man plough ever so deep, he is in no danger of throwing up bad earth.

There is also such like land in Marchland in Lincolnshire, and in the fenny Country likewise alongside Trent. For many miles, in these lands, there is no doubt of good crops, provided they till sufficient to kill the weeds, the under stratum being as good, if not better than the upper in such land.

But this is not the case in most other parts of England and Ireland.

In Cheshire, the farmers cannot plow in some places above two or three inches before they come at a hungry poor red earth, by them called ramil; when thrown up, will lye in lumps or clods upon the surface, and not melt with either sun, rain or frost.

These farmers are very careful not to throw any such like up, as they have proved it to be very pernicious to corn, and also encourage weeds.

I have

I have seen such like thrown up out of potatoe trenches, in a great many places in Ireland.

Some will say, if they want to give land a good dressing, they would plow deep, and manure high; this I grant to be very reasonable, where the land is immediately to be laid down for grass, and that a gentleman or farmer has plenty of men, money, and manure. But in case the land is to continue for tillage, it is quite against reason, except the under stratum be the best, which is seldom the case in Ireland, and that a person have a mind to purchase gold too dear.

In order to be convinced of the folly of deep ploughing for grain, observe a field under corn, that has been trenched for potatoes, and it will be found that the corn, over the parts where the trenches has been, will be green when that on firm ground will be ripe. Indeed, the earliest is put backward, tho' in a less degree, by having this cold mortar, as it were, lying beside it.

I can

I can compare these potatoe trenches to nothing better than a hot bed reversed, for as we dig a trench and bury dung to raise an artificial heat, so are these trenches filled with the best of the soil and manure, while perhaps they are half full of water; if not, there is a ready admittance among this loose mould, for the first rain that comes to lodge, but can get no farther, and so lies as it were in a trough, which compleats an artificial cold bed.

But the evil does not end here, for, as I observed in ploughing too deep, in lieu of this good soil and manure, so buried, there is thrown up a poor hungry earth which poisons the land, and encourages weeds.

So that, in short, there are so many argumetns to condemn, and so many real evils for one good property, attend ploughing and trenching too deep, and particularly in some land, that I wonder people's eyes are not yet open, to see their error. Indeed I do not doubt but some of the more thinking sort of
man-

mankind, gets a stagger now and then, when they see such demonstrable proofs of corn growing green over these trenches, till Michaelmas perhaps, and dung, &c. buried in them.

But prejudice in favour of an old custom, is so predominant, that it is hard to persuade men to enter heartily into a change. I have many a time represented these evils to farmers, and the consequences attending them, which were assented to as right.

But notwithstanding, doubtless, they kept their old road: but indeed a weak argument will keep a man in his old beaten path, when a strong one cannot turn him out of it. It requires too strong resolutions to begin any new enterprize, namely, in him who gives the advice, and in him who is to take it.

For the giver, tho' he be ever so fully convinced, both by reason and trial in the goodness of the advice he gives, yet he dare not press it home, lest it should be badly executed, and mis-

miscarry, by which the shame or blame would fall upon himself.

This makes a modest man who regards his character, give his counsel sparingly, in a tell-tale manner, and not to urge it by protestations, and oaths which some men require, before they have faith to believe, or resolution to put in practice, tho' ever so much to their advantage.

On the other hand, he who is to take the advice perhaps, hears it with pleasure and surprize, nay is persuaded it is reasonable, and determines to follow it; away he goes full of the change, but this volatile spirit soon evaporates, when he meets with his neighbour, John Old-road; methinks I hear the dialogue between them, viz.

Well, Harry Froth, says John Old-road, which way have you been? Been, says Harry, I have been hearing good advice. What a pack of fools we are to go on in our old stupid ways, and can hardly live; yonder's neighbour New-invention tells me, that a fortune
might

might be made by a new scheme, and would advise me to follow it; I think it very reasonable, and will have a trial.

John Old-road scratches his head, and tells Harry, that new schemes will not do in this country; for (says he) I have lived these fifty years, and my father before me, and if there had been any better ways, they would have been found out before now; for my part, I will not be driven out of my road, to be laughed at, if I should miscarry, for any one's whim.

This last part of John Old-road's advice staggers Harry Froth's resolution, and his airy spirits being evaporated, he follows his old path.

I look upon it, that a person who intends to execute any new enterprize well, ought not to be diffident in himself, but on the contrary have a bold, pushing, steady spirit.

But indeed the all-wise Being orders every thing for the best; for, was every man of this temper, improvement
would

Remarks on Agriculture in general. 161

would be at the height, in a little time; and when any thing is at the height, it will inevitably decline, for nothing can stand always in one position.

But as yet we are wholly on the improving side, and have room enough to rise much higher without apprehending a fall.

It ought to be one of the farmer's chief cares to keep his crops of all sorts free from water, which is very destructive both to corn and grass, for tho' perhaps it may not absolutely kill the plants, yet it leaves them at spring, weak, and in a starved condition, so that a good deal of the summer is spent before they recover themselves, which is sure to retard the harvest.

Neither does the evil altogether end in perishing the plants, for it sucks or washes the richness out of the ground, and leaves it of a poor starved hungry nature.

This shews how studious a farmer ought to be, in keeping his land dry, and free from water; and I look upon

Y

it

Demerit

it, that the most effectual way is to follow the method that is taken in the north of England; namely, to lay the land in broad high ridges. This is done in the following manner, viz.

At the first forming the ridges, they take them up two or three times together; that is, they begin in the middle of the ridge to plough and turn the right hand about; some they make twenty, some thirty, and some forty feet broad, according to the depth of the soil, for the deeper the soil, the higher and broader they can afford to make them.

They begin always at the middle of the ridge, and turn the right hand about 'till they raise them as high as they intend.

This is very apt to strip the furrow of the rich and best soil; to remedy which, they throw a little more manure on it than common the first year.

And being thus got into form, they never alter them after, but take them
up

Remarks on Agriculture in general. 163

up one time, and put them down another.

Observe never to sow any grain on an open ridge, so called, when the furrow is in the middle, at the time it is put down.

I do not remember ever to have seen in Ireland, a ridge taken up above once together, consequently the sole under their ridges is flat or level, having no sheed for water.

Now were we to strip the upper surface from one of those English high ridges, we should find the same sheed for water under, as it had at top. In this case, there can be no rest for water there; but were the like done by the Irish ridges, the under sole would be level.

Now, since these two kingdoms have such different ways of managing, one of them must be wrong; for the north of England and Ireland have a climate much alike; tho', of the two, Ireland somewhat wetter.

It

It is the custom with the English farmers, to gripe, or what is all as one, to make small surface drains across the ridges as soon as ever the corn is sown, cutting them about ten inches wide, and a little deeper than the bottom of the furrow.

In most parts of England, they mow all sorts of corn, except wheat or rye, and particularly in the corn countries; this is certainly the best way, for two reasons.

First, because it is by much the cheapest, and does not let the corn lye under the mercy of bad harvest weather, being got out of the way more expeditiously.

Secondly, it makes more and better fodder, as a great deal more of straw and grass is cut with it, consequently must make more dung.



C H A P.

C H A P. V.

Remarks on Burn-baiting.

I Referred my reader hither, to give my reasons concerning Burn-baiting, which I hope to prove to be one of the best pieces of husbandry that can be used, particularly for the reclaiming of some rough course grounds.

In the first place, it completely clears the ground of weeds, rushes, heath, or rubbish of all sorts.

Secondly, it converts these very enemies to a friendly manure of the richest kind, for the production of crops, to which before, they were mortally averse.

Thirdly, the burning the fod, on the ground, warms it, by which means the earth is set a working, and brought to a separation; so that the salt or nitre thereof have a free communication to the roots.

Burnt

Burnt land will bring three or four very plentiful crops.

Indeed nature will not stop in this burnt land, till she has exhausted herself of her virtue to such a degree, that one kind of manure will scarce relieve it, therefore must have a mixture of two or three kinds of manure, in order to set their different spirits working together, by which it will the sooner incorporate with this worn-out soil, and make it answer for a crop, and particularly turnips, which is the best crop that can be sown on such spent land, to bring it into heart, by eating the turnips on the ground, and the year following to sow the land with barley and clover.

Were my brother farmers to suit this burnt-land with proper crops, there would be no danger of running it out, and this they may do, with great profit to himself, and advantage to the land; it is a prevalent opinion amongst the English farmers, and I think reason backs their opinion, that burnt land should

Remarks on Agriculture in general. 167

should never be sown with more than three crops before it is laid down.

The first should be rape or cole-seed.

The second turnips; the third and last barley, and laid down with clover.

These are three very profitable crops, and the two first are great improvers; and so is the clover.

These crops I am certain, adds strength to the land, particularly if the turnips be eaten on the ground, as I observed.

But were the said land sown with three crops of corn, one after another, it would ruin it to all intents and purposes; insomuch that it would hardly leave it recoverable; and yet the first mentioned crops are by much the greatest profit.

If so, there certainly can be no other reason for a farmer's spoiling his land, than a positive ignorance.

The farmers in England avoid raising corn from burnt land, as it does not sell high

high, having a coarse thick skin, and not yield well in either flour or meal.

But indeed, the Irish farmers are not over and above delicate in regard to their grain, either in chusing plump or thin skin'd corn for feed, or in winnowing it clean, which is a very material point to the look of corn for sale. Let it be ever so good, if it be not well cleaned, and the light corn tallied out, it will not be fair to the eye: but on the other hand, tho' the grain should be but indifferent, if it be well handled it greatly helps it both in look and value.

I have known Ireland many years, and have seen some hundreds of people winnow, but never saw one yet go in a handy right way about it, except at a gentleman's house, where they have been directed by English stewards, and very seldom in this case, for except a man be endued with the patience of Job, to persevere in the task of his directions, he must be tired out; for many of the common people are like a
head-

head-strong mule, (pardon the expression) that will neither lead nor be driven out of their old road.

Indeed I have taught several of these obstinate sons of Adam, to follow the English method, in several branches of husbandry, yet I never could get any thing rightly executed by verbal directions; my method is always to stand by, 'till I get a pattern done to my mind, tho' it should be done and undone several times, before it can be brought to bear. But indeed, I generally set a pattern, with my own hands; and then see that they repeat it; for I conceive that it saves much trouble to ground a learner thoroughly in the beginning, also to use persuasive arguments with a mixture of good-natured authority. By these, and such like methods, I think I could get any design well executed.

But indeed, a good deal depends on a farmer's being a judge, and a handy man himself. It is true, he may go into the field amongst his men, and

fee his horses badly harnessed, and his plough-man make bad work, and tell him so; but what does it avail, if neither master nor man can set matters to right.

He is the right farmer and master of his business, who can right every thing that is wrong with his own hands. No man ought to think himself above doing this; particularly, if he pretend to instruct others at all. It is no shame to any one to be useful and ingenious.



C H A P. VI.

Remarks on Clover.

SOME persons object to the eating of clover, the first winter after it is sown, believing it to weaken the crop; but, on the contrary, I believe it strengthens it; for as clover grows amongst corn, it is drawn up weak and tender, by its warm situation of being surrounded by the crop, and when a tall weak plant of this sort, comes to be suddenly exposed, it is a wonder if the delicacy of its constitution can bear the change without a shock; therefore not fit to encounter with the inclemency of a winter.

I look upon it to be much better to eat off this weak aspiring top, by which means it makes the root strike downwards, grow strong, and incorporate with the sole or earth; the top also will send forth fresh shoots, more of them, and of a firmer kind.

To

To convince myself of this, I once divided a field of clover in two parts, one of which I eat in common with the rest of the stubbles, the other I did not eat at all 'till May.

The part I eat I found to be a good deal ranker or thicker set on the ground than the other; and I observed that the leaves of the clover that was not eaten, turned yellow with the frost and died away.

In this case, as in most others, reason speaks for itself, that it is better to take off a sickly, tender, weak part or fibre, than to let it dye away, and thereby communicate its state of mortification to the main body.



C H A P. VII.

*Remarks on setting Potatoes with the
plough.*

METHINKS I see my brother farmer turn hither in a great hurry to see my reason for advising him to set his potatoes with the plough: and not to keep him in suspense, I plainly tell him, that it saves both men money, and dung; besides improving the land, instead of poisoning it with bad earth, as before observed.

First, it saves men, as one man, two horses, and five or six boys or girls, will set as many potatoes in a day, with the plough, as seventy or eighty men could set with spades or loyes.

Secondly, it saves dung; as one load will go as far as four.

Thirdly, none of the dung is lost, by being buried in the trenches; likewise

wife every bit thereof takes place immediately, as a lump is dropped upon every potatoe.

Fourthly, the potatoes are nearly clear gains, as they may be sown upon land that is intended for summer fallow, and will absolutely receive more benefit from this potatoe fallow, than if nothing had grown; for what with hoeing with the plough, and the tops smothering the weeds, the ground is made clean and mellow, and in fine order for a wheat crop at Michaelmas.

In which there can be no disappointment, as the potatoes can be ploughed up in a speedy manner.

All these reasons put together, I hope will prevail upon the Irish farmers, or people in general, to follow this cheap and easy method; as nothing concerns a farmer so much as working his land with the greatest dispatch, and the least expence that reason can devise.

As I have travelled between England and Ireland, for near twenty years past,
I have

Remarks on Agriculture in general. 175

I have had an opportunity to remark how the different markets ruled in the two kingdoms, and I always found that in the city of York, Lincoln, and in large towns, such as Leeds, Wakefield, Doncaster, Sheffield, and in short all over England, where it is customary to set potatoes with the plough, they always fell lower than in Ireland.

This fact is incontestible, altho' it is well known that in these places, land is higher, and labour of near three times the value.

This shews they must have a cheaper way of coming at them, or they could not be afforded at a lower rate.

Further, the method is so easy, of setting with the plough, that I think I could teach, in an hour, as many as could look at me.

C H A P.



C H A P. VIII.

Remarks on the folly of burning Stubble.

I Have omitted in my receipts of farming, a custom used in some places, by farmers burning the stubble on the ground, which is called bastard burn-baiting.

But I did not chuse to take notice of it, as I take it to be a bad piece of management, and which ought to be condemned by every thinking person. I am therefore the more surprized to see it recommended by several writers on husbandry.

Such authors should consider that stubble is not like rushes, heath, or weeds of any kind, that are noxious in their nature, and whose destruction is of benefit, indepent of the manure into which they are converted, and which they yield in large and rich quantities, by means of their substance and verdure

Remarks on Agriculture in general. 177

dure being replenished with salts, oils, and sulphurs. But this is very far from being the case with stubble, it is half dung, and in no danger of growing. As it is light and dry, fire instantly dissipates its contents into air; and with respect to the warmth that the blaze may communicate to the ground, it has neither the intenseness nor virtue of a single hour of a summer's day.

But if the stubble or straw was plowed in, it would rot and yield all the substance that it has in manure.



Aa

C H A P.

C H A P. IX.

On Pickles for Wheat.

THERE are a great many receipts, and various methods taken to preserve wheat from smutting, and to add to the fertility of its growth.

The most common method is, to steep it in pickle, strong enough to bear an egg, for twelve hours, then lime it till it be dry enough to part freely.

Others add to this pickle, for every fifty gallons, three pounds of copperas.

I have steeped wheat in train-oil, but this is expensive, neither do I think it effectually prevents the smut, but however it adds greatly to its fertility.

Others only wet their wheat in chamberley, and limes it, then sows it: but the most effectual receipt I ever knew, heard of, or practised for preventing smut, and adding richness to the seed, is as follows, viz.

Take

Remarks on Agriculture in general. 179

Take a hoghead, and let it into the ground, with its top even with the surface, and have a moveable cover thereon.

In this keep chamberley, from one seed time to another, the older the better; and add to it all the galls you can get, either of fowl or cattle.

In this steep your wheat twelve hours, draw off the liquor, and return it to the hoghead, for it becomes much more valuable by age.

Lime the corn, till it is brought to a proper consistence for sowing; when thus done, sow it.

I might add several other receipts, but it is needless, as none can be better, cheaper, or easier got than this.

C H A P.

CHAP. X.

Directions how to plough with one man and two horses.

AS to ploughing with two horses only, and one man to drive and hold, there is nothing more easy, and what is commonly done in several parts of England, and I have introduced it to several gentlemen, in Ireland; by which a great many petty farmers has fallen into it.

Within this five months, I have had near two hundred of these ploughs bespoke; but as I have only one man to make them, there is a greater call than he can supply, therefore I propose importing a large quantity from England.

There is a great many sorts of plows in England, but these are allowed to be the best, comes at a low price, and is least subject to be out of order, when once fixed.

The

The method of yoking a pair of horses to the plough is this, viz.

Place them side by side, fasten their traces on a pair of swingle-trees, or (by some called a knot of geers); let their traces be so short that they will only just have room to walk without hurting their heels with the swingle-trees.

Have the same regard in yoking the swingle-trees near the beam of the plough, not to leave above two or three links between the hook of the swingle-trees and the muzzle of the plough, for the nearer the cattle is kept to their load, the easier it follows.

Being thus fixed to the plough, tie to their heads a string, leaving them at the most, not above eighteen inches asunder, after which fix your whipping strings, one to the off-side-bit of your right-hand or furrow-horse, and one to the near-side-bit of the left-hand or land-horse; run the strings through holes made in the hems, on the same side the strings are fastened; and the strings

strings must reach to the handles of the plough, in order for taking hold of, to guide and whip the horses.

Their heads being fastened together, pull either string you please, and they both follow, much the same as two horses are drove in a coach. The whipping strings are about the size of a small jack line, made of good stuff; to these cords are fixed handles, four feet long, made of hemp and taper, much like a whale-bone whip, the thick end about two inches diameter, in which is made an eye or noose, to hang on the handles of the plough. This handle gives the string a fall, so that it will cut a horse surprizingly; therefore performs the office both of whips and guiding reins, which makes it very easy to the plough-holder, as there is one hanging upon each handle of the plow, ready to take hold of.

And these two horses and one man will plough as much and as well as double the number.

This

Remarks on Agriculture in general. 183

This is plain to me, and to every one who follow the two-horse plough; but were I talking or writing to eternity, it would be impossible to persuade men to it without seeing it put in practice. The answer would be, It might do in some countries, but it would not do here. Thus I was answered in some places in Ireland, and even laughed at when I first set out two horses in a plough, and one man to plough and drive; but, in spite of all their perverseness, and unhandiness, I made them in two hours time, plough very well; and they have stuck to the same method these eighteen months past.



C H A P.

C H A P. XI.

On Burnet.

BURNET is a native of these kingdoms, and is to be found almost on any dry bank or ditch, or in a common pasture, provided it has lain long under grass.

Its perfection is chiefly for winter-feeding; its quality is nearly to that of vetches, and the plant is not much unlike them; but the seed is quite different, being rough or prickly, much like spinage, and of an oval shape.

This grass may be propagated either from the seed or from the plant; but the latter is attended with trouble and expence; therefore I take it to be the best way to raise it from the seed.

The best season to sow it in, is that of September, by which means it will be well grown for winter-feeding.

It is prudent to lose no time after the crops are all off the land, but plow the
the

Remarks on Agriculture in general. 185

the stubble immediately, and sow the seed; manage it in every degree as you would vetches. See vetches.

Four bushels is sufficient for an Irish acre.



Bb

A month

A monthly Calendar, or Memorandum of Works to be done as they come in season round the year; so that lest a farmer may forget himself, let him look for the month he is then in, and he will see what works ought to be going forward.

J A N U A R Y.

IN the beginning of this month, plough the fallows that missed plowing in Autumn.

Plough for beans, and pease; take the ridges up to lye dry; toward the latter end of the month, sow them, if the weather permits.

Untill this time, eat the clover with sheep, or light cattle, so as not to tread it, but know it must be laid up to get a head against spring, for early lambs, &c. or meadow.

At

At this time, and from Michaelmas, is a good time to repair quickset hedges, by laying the thorns down in gaps, or open places, where the fence is thin at the bottom; nick the thorns two-thirds of the way through, in order to make them bend, and lye easy, by which they will be surer to grow than if they were bent without nicking, which would bruise, and wound the wood, and prevent the sap from rising past the bruised place; whereas, if it was cut as thin as half a crown, provided the uncut wood bent easy, without bruising, the sap would circulate through the narrow uncut place, to the branch, which would flourish and spread along the bottom of the hedge, and make a good fence.

This in England, is called splashing. The labourers in Yorkshire, and Lincolnshire are very expert at it; if the hedge be ever so ragged, and thin, provided the tops will meet, they will make a good fence, which the year after will almost turn a hare, when the
young

young fibres shoot out. But this piece of dexterity is not universal in England; and in Ireland I never saw any of it; tho' few people in the world go to greater expence in planting quicks, and making ditches, &c.

Continue to brake and swingle hemp and flax.

This is the best time to thresh out the barley, as it is wanted for malting, and the straw, which is not quite so good as oat straw, will eat best in hard weather.

Early lambs will now begin to drop, turn the ewes to turnips, if you have any, which will fatten the lambs quickly; but if the weather be wet, and the ground soft, it will be too cold for the lambs; in this case, pull the turnips, and take them to the ewes on grass land, but have no regard in this case for wethers, as they will feed better on the ground where the turnips are fast at the root, which keeps them fresh and juicy. Remember to send men

men to pick up the shells, or bottoms of the turnips, that they be clean eat up, before you make a fresh break.

Remember your bees, and if weak, feed them with cakes made of malt flour, mixed up with sweet wort, or a cake made of rye meal, mixed with treacle-water, or give them brown sugar.

Plough your barley fallow for the second time, as I suppose it was plowed in Autumn to turn the stubble under.

Towards the latter end of the month, if the weather be open, sow vetches, whether for seed, fodder, or feeding on the ground.

F E B-

F E B R U A R Y.

SOW beans and pease, which ought to be done, if the weather permit, before oat-seed time.

Towards the latter end of the month, if the weather be open sow oats.

The rye that missed sowing in Autumn, must be sown at the beginning of the month.

Plough your barley fallow, if not done last month.

Continue to splash quickset hedges.

Lay up your meadows, clean them from all sticks, stones, and rubbish that may be obstructive to the scythe. Spread and break horse and cow-dung, ant-hills, and mole-hills, which is done in a cheap easy manner with a molding-sledge.

Look over your wheat land, lest any water stand by the stoppage of fods or stones falling into the furrows and gripes.

Your forward fat lambs will now begin

begin to be ready for the market; do not keep them too long, for what they gain in size they lose in price, as the markets drop when the season advances, besides, if they are off early, the ewes may be fed on clover, and be ready for market early also.

Set potatoes, to come in early. Lay them first, and cover them well with long horse dung, to preserve them from the frost.

Continue to break and swingle hemp and flax, and peel winter hemp.

Begin to beat the seed out of the flax.

The dew-rate flax must now be spread on the grass: the snow, frost, and rain rates it well.

Remember to feed your bees.

Continue to spread foot on your wheat, to kill the red worms, at the rate of five barrels to the Irish acre.

M A R C H



M A R C H.

THIS is a very busy month with the farmers, and it behoves every one to bestir himself, to get the proper crops into the ground in due season.

Plough for, and sow oats, if clover be to be sown among them. When the oats are harrowed well, sow the clover seed, and bush-harrow it; but I take it to be the best way to defer sowing it till the oats are come up, then sow the seed, and roll it in.

If the season be good (but not else) sow barley.

Sow mustard-feed; the ground, if stubble, must have two ploughings, but it will grow with great success on lay-land if good, with once plowing, harrow it well before sowing, and after sowing roll it.

Lay up, dress, and roll your meadows.

The fat sheep must now be kept
draw

drawing off the turnips, as they now begin to grow near an end, and the markets advance much about this time.

You may yet sow vetches, tho' it were better done sooner.

Finish splashing quickset hedges.

Turn your ewes and early lambs into clover or ray-grass, as the turnips are near an end.

Widen the passage for your bees, and continue to feed them if required.

Geld your year-old foles, take care to rub their thighs, and over their kidneys with marsh-mallows.

Set the tails of your young horses. It is also a good time to break them.

The calves that drop now, ought to be kept for rearing, but as milk is at this time scarce, a good drink may be made by boiling hay till the water is very strong, into which put, for every three calves, and so in proportion, a pint of flax-feed, a pint of oatmeal, and a quart of skim-milk; put the flax-feed in along with the hay, and

C c

boil

boil it all the time; it will be smooth and like a jelly, put the oatmeal and milk in when the hay is taken out, after which give it a good boil.

There is no finer feeding for calves than this, it does both strengthen them, and make them grow large, and it is very cheap for rearing them with. There are people in England who make a very comfortable living by buying calves as soon as they drop, and rearing them thus; but indeed they seldom give them any thing but flax-feed and hay-water. After the first month they can buy the flax-feed from the oil-mills, at about three shillings and sixpence a bushel, and a bushel will rear two calves.

I have heard of farmers in Lincolnshire, rearing from sixty to a hundred calves in a year, by this method.

Put out dung for potatoes, and set them whether by plough or spade.

Sow flax-feed when the land is well harrowed.

At

At the latter end of the month, if the weather be good, roll wheat, bare, and rye, but sow the grafs-seeds first, if they be intended.

Sow broom and furze-seeds on the tops of ditches for shelter, but if it be a gravelly ground, they will not grow well; therefore make the drill deeper, in which throw a little good earth to sow the seeds in, this is easily done, and the crops are surer of success.

Clip young quicksets, to make them spread.

Water or rate the bunch-rate flax, if the water be clear of ice.

Turn your young cattle on to the bog or coarse mountain, which will eat better from this, till the latter end of May, than any time of the year; and is of great use to save the fine pastures till they get a head, by which the grafs retains the dew, and the sun is kept from the roots.

Towards the latter end of the month,
if

if the weather be good, sow barley;
and grafs-seeds after it is harrowed,
and bush-harrow, or roll them in.

Spread foot on your green wheat.
See receipt for red worms.

Sow burnet or vetches, to stand for
feed.



A P R I L.

A P R I L.

THIS is also a busy month with the farmers.

Sow buck-wheat, hemp, lalucerne, faintfoin, rye-grass, clover, hay-seeds, &c.

Sow barley, which ought to be finished this month, tho' some will sow till the middle of May, but this is better avoided if possible; but, indeed, it's better to wait a month, than sow in soft dirty wet weather.

About the middle of this month turn sheep into clover.

Finish rolling, stoneing, and cleaning the meadows.

Destroy young rooks, and their nests, which is easily done by small, long poles, one spliced to another, with an iron crook fixed to one end, which will easily pull the nests down.

Plant quicksets and forest-trees of all sorts.

If

If time permit, in the latter end of the month begin to pare your land for burn-baiting.

This is a good time to begin to dig, drain, and reclaim your bog, as directed. See reclaiming bog.

Clip your quickset hedges.

Continue to keep your cattle on the bog and mountain.

Delay no longer to water or rate your bunch-rate flax, for in hot weather the worms, both in water and on the grafs, will damage it.

Sow mustard-feed.

Cut turf, and provide winter firing.



M A Y

M A Y.

WE may now suppose most of the busy seed-time to be over, but if any of the latest crops, such as buck-wheat, barley, and grass seeds, of all kinds, and potatoes remain unsown, finish as soon as possible.

Cross harrow your fallows of all sorts, and plough them, after which blood your horses, and give them a fortnight's rest, which will be necessary to refresh them, after their hard seed-time labour.

The first of this month, old stile, break your summer pastures, bleed your horned cattle of all sorts, and give them a lick of tar.

This is the time to buy in your incalvers for milk: make choice of those with a fine long small green horn, fine and clear of leather under the chops, and a good full shoulder, deep chested, broad and well made behind, a straight broad back, full hips, with short straight legs, a walk open and stately,
a thick

a thick skin, and broad rib, with a good milk-vain and udder, and large teats; such dams are worth breeding, or rearing calves from, and their calves will cost no more keeping than such as are quite the reverse to the above description. Were a farmer to bear in mind that a calf, when a year old, of the above beautiful shape, will bring from forty to fifty shillings, when one of the ill favoured kind, (as Joseph called them) will not give, perhaps, above ten or fifteen shillings; certainly he would be more nice in his breed, particularly when he considers they both take the same keeping. Were all farmers, or breeders to be so circumspect, what a beautiful brute creation we soon should have?

Give the breed-mares the horse, and as they are generally low in flesh, from their hard labour, they will be more apt to hold in sole.

Put your dung out, in dunghills, in fallow fields where it is to be spread.

Con-

Continue to destroy moles, rooks, magpies, &c.

Look after your bees, which if strong, will now begin to swarm, and one swarm now will be worth two later in the season.

Continue to pare your land for burn baiting, and if the season be wet, the fods must be set upon an edge to dry.

Towards the latter end of the month, plough your fallows, that were cross-harrowed the beginning of the month.

Weed your wheat, and if too forward or rank, eat it with light cattle, such as calves, foals or sheep.

Roll your wheat, and all sorts of grain, first sowing the grass-seeds intended.

Lay up your clover intended for hay, or seed; but if a crop of hay, and a crop of seed be required, it must not be eaten in spring, by which it will be ready to mow by the middle of this month, and the seed crop will come in good time.

D d

Cut

Cut turf and provide your winter firing.

You may yet continue to plant fir-trees.

Continue to geld your young colts, this being the safest month in the year, as the young grass purges them, and keeps them cool and open.



JUNE

J U N E.

THE clover must not be eat any longer (that is intended either for seed or hay) than the first of this month.

The forward clover's first crop will be now fit to mow; take it when it is very early in flower.

Continue to cut turf, and provide the winter firing.

About the twenty-fourth of this month, the buck-wheat, pease, or vetches will be ready to plough in for manure.

As near the twenty-fourth as possible, and when there is a prospect of rain, sow turnip-feed.

Weed hemp, flax and corn, early in the month.

Look after your bees, which in hot weather will swarm and do well if early in this month, but the latter end is too late, if it could be helped.

Weed your quickset hedges.

This

This is the time to burn your land intended for turnips, rape, or cole-feed.

Wash and clip sheep.

Bleed your cattle, particularly poor cattle, when turned to feed.

About the twenty ninth of this month, sow rape, and cole-feed.

The beginning of this month, rye-grass will be ready to mow.

The latter end of the month, natural meadows will be ready to cut.

The rape and cole-feed, will be ready to reap the beginning or middle of the month.

Look after your rank flax, and if it lodge, turn it as directed, see page (4)

Burn lime for your fallows.

Hoe and weed potatoes, set with the plough or spades.

Plough and sow your rape and cole-feed stubbles with turnips.

Provide pits, to rate flax in.

J U L Y

J U L Y.

THE North of England and Ireland are now busy with their hay harvest, but the south of England has got it over.

Continue to sow rape and cole-feed, which may be done with success to the last of the month, and it is better to wait a week or a fortnight for a prospect of rain than to sow in dry weather, for if the ground be very dry, a great part of it will not come up till rain falls.

The latter end of the month turn bulls to your store heifers.

When the weeds or grass grows, your fallows must be ploughed.

Towards the latter end of the month, early rye will be ripe, reap it.

Pull and rate female hemp, take care not to break the seed hemp, when pulling the female.

Pull and rate your white flax, beginning under the hedges, or where it lodges.

This

This is the best time to buy in store heiffers for the bull, which will be got as cheap now as two months sooner; by which you will save the grafs to get a good head, which will bear more stock.



AUGUST

AUGUST.

THIS is the harvest month for the North of England and Ireland, but in the South of England it is mostly over.

Rape and mow all sorts of corn, as it becomes ripe, but some will not be ripe till the next month, particularly what grows on cold wet land.

As soon as the corn is off, plough for, and sow turnips, burnet, or vetches, for winter feeding, which will do the land good, and be a great help to fodder.

Plough your fallows for the last time, except the seed-furrow ploughing.

Pull and stack seed flax as directed. See page 11.

Fallow your flax-stubble for wheat, which will be in fine tilth by Michaelmas with two ploughings, and there will be no doubt of a good crop.

Turn rams to your ewes for early lambs.

Hoe

Hoe your turnips.

Put your bulls to the store heiffers.

The beginning of this month buy in the store heiffers for the bull; but take care they are not bulled before you buy them.

A fure token to know this, is, if there be wax in the teats that you can fetch out, by drawing them between the fingers.

Again observe the barren, and if there be a drop hanging at it which mostly gathers dirt, this is a fure sign she is bulled.



S E P-

S E P T E M B E R.

CONTINUE to get in the harvest, which will be all ready this month.

Pull your seed-hemp towards the latter end of the month, it will be dry ready for threshing.

Turn the rams to your ewes, buy in half-thick sheep, and bullocks for winter feeding, turn them into your after-grass, and when it is eaten, turn them into the turnips.

Provide fence to pen on the turnips, either nets, sheep-bars, or faggots.

Plough stubbles for winter fallows.

Thresh seed-wheat towards the latter end of the month.

Sow vetches or burnet for winter feeding.

Sow wheat, rye, and bear, take care to water-furrow and gripe it, to keep it dry.

Wean your foals.

O T O O

E e

Fu:

Put your hogs up to feed for pork.

Clean or open your water courses. In the North of England this is compell'd to be done by a water-jury, appointed for that purpose, who views all the drains, levies fines, and recovers damages for any one that is aggrieved by reason of his neighbour's not scouring his drains, upon proper notice given.

Turn your hogs into the stubbles and woods to gather acorns.



O C T O B E R.

SOW wheat, rye, and bear; water furrow them, and gripe it as soon as sown.

Plough stubbles for winter fallow, but this must only be done in wet weather, or in such times as wheat-feed sowing cannot go on.

Plough up your potatoes that were set with the plough, and sow the land with wheat or bear.

Begin to splash quickset hedges, and scour the ditch to lay at the root of the quicks.

Scour or clean all water-courses, to give the water when it comes, a ready passage.

Continue to sow vetches and burnet for winter feeding.

Now is the time to take or drive your bees; but it is better to kill the bees in the hives you intend to take, than to run the hazard of losing two swarms,

swarms, by driving, which is often the case; for when two swarms are put to the allowance of what honey there is in one hive, that hive not having enough to support them all, they eat what there is, and then perish for want.

The way to drive them is to put the mouths of two hives together, and they will go into the upper one.

The way to kill them is to make a round hole in the ground, which will fit the mouth of the hive, in this, stick three bits of sticks, about six or eight inches, slit the upper end, in which fix three linen rags dipped in brimstone, set them on fire, and over them put the mouth of the hive downwards, and stop it close round with fods, so that it will neither let smoak or bees out; this will effectually kill all the bees.

Prune and plant all sorts of forest-trees and quicks.

The flax and hemp has by this got a sweat in the mow, begin to break and swingle it out.

Streighten

Streighten the passage for your bees,
and take care that no mice or snails
come at them, they being great ene-
mies.



NOVEM-

NOVEMBER.

NOW is the time to finish plowing all your winter and insuing summer fallows, whether stubble or lay-land, and then lay by your ploughs, and harrows dry 'till January.

Put up your hogs to feed for bacon.

Moss-harrow your lands, either summer pasture or meadow.

Take up your cattle, and horses of all sorts; put cows into the house, and bullocks and other dry cattle into the barn-yards to eat straw.

For the conveniency of which make racks to stand on four feet, seven feet long will hold a large arm-ful of straw.

To every two beasts have one of these racks, and disperse them about the yard, so as cattle may walk and eat round them.

Turn your sheep into the turnips, and confine them to what they will eat in a week.

Buy

Buy in small store pigs, to turn into the barn-yard, to eat the loose corn that falls under the stand-racks, which will pay well by May.



DECEMBER

D E C E M B E R.

THIS is one of the farmers months of rest partly, not having much to do.

When the ground is clear of frost, moss-harrow and roll meadows or grass ground, of all sorts that wants it.

Look after your fat sheep, and give them a little hay to clean their mouths from dirt, occasioned by their scouping the turnips out of the ground.

Pick up the turnip shells with a fork, that the sheep may eat them clean before a fresh break is made.

Kill your bacon hogs.

Take care of your young foles, and instead of threshed oats, give them fine oat sheaves, which is better for them.

Turn cattle into your burnet or vetches that was sown for winter feeding.

Spread foot, or the compound of salt to kill the red worms, and enrich the land. See receipt.

C H A P.

C H A P. XII.

A Receipt to kill red Worms, so destructive to green Wheat.

TO one acre take five barrels of foot, mix with it three pounds of copperas well pounded, sow or spread it on the land when the corn is about being weaned from the kernel.

If foot is not to be had, take the bulk of two or three wheat sheaves of wormwood, dry it in an oven, or otherwise, so that it will bruise to powder, with this mix two bushels of common salt, four bushels of quick or powder lime, and three pounds of copperas bruised to fine powder, let these when well mixed, lye some time to incorporate, then spread it on the land. This will be sufficient for an Irish acre.

C H A P. XIII.

On different kinds of Manure.

WE deem any thing that produces the most salts or nitre, to be the richest manure, therefore a less quantity is required.

As for instance, some sort of marl requires to be laid nearly as thick as the plough goes, and others not much thicker than lime, being so strong, that were too much laid on, it would destroy the land to such a degree, that nothing would grow well for two or three years after.

There are few farmers but what may know which is the best manure, and the easiest come at, therefore I shall leave them to judge for themselves, which suits their purpose or situation best.

Horse, cow, and hog dung is good, almost for every sort of land and grain; and every one knows best what condition

tion his land is in, for thereto it must be suited with dung.

Pidgeon dung is a very rich manure, and will bear land-carriage better than most others, as a little will go a great way. In England it will sell from ten to thirteen pence per bushel, sixty of which will give an Irish acre a good dressing; it must be sown upon the ground, and harrowed in with the grain.

Those that would make the most of a pidgeon-house, should spread over the floor, every ten days, three or four bushels of ashes, which will help to keep the pidgeon dung from caking together, and make it spread even, and go farther.

Hen or fowl's dung, of all sorts, should be mixed with ashes, for the above reason.

Little-house dung is one of the richest sort of manures, but the least regarded, on account of its soft stinking quality; but this is easily cured by throwing a sufficient quantity of roach lime into the little house, which will dry

dry it to such a consistence that it will spread as well as ashes, and have no disagreeable smell.

Forty bushels will spread an Irish acre, harrow it in with the corn.

Soot is a rich manure for any kind of land. Writers differ greatly in their opinion, whether coal or wood soot be the richest, but this is throwing words to the wind, as no one, will change his fuel for the sake of the difference in the soot; the matter is so trifling, that it is not worth entering into any particulars about it. Soot is soot, and he that lays twenty bushels on an Irish acre, of any sort of soot, gives his land a good dressing, and less will not do: it must be harrowed in with the corn, or it may be spread after the corn comes up, and it will destroy red worms also. It will do very well for meadow, provided it be laid on just after the hay is got off.

Ashes is another good manure, and particularly for turnips, as turnips from
burn-

burn-baiting, are the sweetest and best of all others.

Ashes are raised by several means, and from various principles. Some by burn-baiting, others from our constant firing, such as coal, turf, or wood. The richest of these is wood; the next in value is turf, and the worst of the three is cole; tho' between turf and cole there is no material difference; all sorts of ashes lose their strength by being thrown out of doors to get wet; a hundred and sixty bushels of wood-ashes, and two hundred and twenty of either turf or cole is the due for an Irish acre; and so in proportion for an English one.

Burnt clay, or backs of ditches is another forced manure, about three hundred and twenty bushels on an Irish acre; being two bushels to each square perch, will give land a good dressing.

Now I come to treat of the mother of all manures, namely, salt; for every sort of manure is higher or lower in value,

value, according to the salts it produces; and every sort of manure is proportioned to the land according to the quantity of salts or nitre it is thought to have in it, and not to the bulk.

Formerly salt was thought to be an impoverisher of land, but experience has taught wisdom; it is now found to be otherwise, provided it be duly proportioned to the state the land is in, and mixed to molify it as follows, viz.

Take six bushels of salt, six bushels of lime, and six bushels of dry ashes, mix all together, let them lye some time to incorporate together, then spread them on the land, and harrow them in with the seed; this is sufficient for an Irish acre.

By being thus mixed, one particle incorporates and molifies the other, salt in itself, is rather too severe and harsh in its nature, and if laid too thick on, might prove of bad consequence; whereas if conveyed into the earth by a soapy smooth method, will prove the
very

very enricher the earth wants, to set forth vegetation.

I am convinced, if a farmer was to mix salt with any sort of earth or manure, and let it lye long enough to incorporate, he might lay it on thinner in proportion, and he would soon find his ends in so doing.

Sea-weeds, shells, fish, sea-water, sea-sand, all these bear a proportion of salts or nitre, therefore must be esteemed a manure.

Old rags, rotten sticks, or in short any thing will make manure that will rot or putrify.

Crossing nature, in any case, makes it work, ferment, and divide the particles. Even taking one piece of soil ten or fifteen perches from the spot, and mixing it with another pice in the same field, will set it a working, so that one will help the other in fertility.

Lime is a manure known by every one, tho' but few know rightly how to proportion it to the land, as some land will require more by twenty bush-
els

els than others; and, on the other hand, a hundred bushels of some lime will give the land as good a dressing as an hundred and thirty will give to others. A farmer must certainly consider all these circumstances before he can be a thorough judge how to dress his land properly.

An hundred and sixty bushels being one on every square perch, is sufficient for the worst land in Ireland; but if the lime be stronger than common, lower the quantity 30 or 40 bushels.

The way to try lime-stone is by dropping a little aqua-fortis on every stone, that is likely, and if it hisses and froth, it will make lime, but it will take no more effect on any other sort of stone than water would.

This is also one way to try marl, or gravel of any sort.

Another way to try them is with vinegar: take a glass of vinegar, into which put a little marl or lime-stone-gravel, and if it be good, it will work up, froth, and make a noise like new barm,

barm, but if the earth be poor, the vinegar will take no effect, but the earth will fall to the bottom, and the vinegar will be fine above it.

Soaper's waste is a very good manure, about twenty tuns is sufficient for an Irish acre.

Large quantities are made use of about Liverpool, which is taken over for ballast of ships. They generally sell it for about three shillings a tun.

Ashes made of weeds, for the time it will last, is nearly as good manure as can be laid on land, and there are few farmers but have plenty of it about their houses; but the way to make the most of them, is to dig them up by the roots, and take a sod along with them; by this they will make a greater quantity of ashes, and the roots are fuller of salts than the top.

Forty bushels will give an Irish acre a good dressing; harrow them in with the grain, or they may be spread on green wheat any time in winter.

C H A P. XIV.

An Explanation of Names.

I Have kept up as much as possible, to the Irish phrases, or names for implements of husbandry, &c. but as necessity obliged me to make use of some to which they were strangers, I shall explain them in the following few words, viz.

Breaking and swingling are the English terms for dressing flax out of the rough. In Ireland it is chiefly known by breaking and scutching.

Rating is the English phrase for watering flax; but in Ireland the word bogging stands for that of rating or watering flax.

Gripeing is the English term or name for small surface drains, made to take off the downfalls of water from corn or grass land.

Taking up land is an English term for raising ridges high in the middle, by the plough, when the horses turn to
the

the right-hand about, by beginning in the middle of the ridge.

Putting down is when they begin in the furrow, to plough and split the ridge in two, leaving the furrow in the middle, by turning the left-hand about.

When the English flax-farmers commend their flax for its goodness, they generally say it has a good strong clear open harle; this harle is the skin or flax which peels off from the stalk from one end to the other without breaking; this is called the harle.

A quarter of any sort of grain is called two barrels, eight bushels, or thirty two pecks, Winchester measure.

Ketlock-feed is a black round seed, much like rape-feed; it grows as a weed with a yellow flower, and in Ireland is called brushebuy; it is full of oil, and would sell at the rape-mills to make oil.

A S C H E M E

the right-hand about by beginning in the middle of the ridge.

Putting down is when they begin in the furrow, to plough and split the ridge in two leaving the furrow in the middle by turning the left-hand about.

When the English farmers recommend their land for its goodness they generally say it has a good strong clear open barbe; this barbe is the high or flat which peels off from the flanks from one end to the other without breaking; this is called the barbe.

A quarter of any sort of grain is called two barrels, eight bushels, or thirty two pecks. The black seed is a black round seed much like rape seed; it grows as a weed with a yellow flower, and in Ireland is called blackberry. It is full of oil, and would sell at the rape-mills to make oil.

at the rape-mills and at the oil-mills. It is a very good seed for the land and is called blackberry.

A S C H E M E

For maintaining the POOR,

*Humbly offered to the LEGISLATOR,
DUBLIN SOCIETY, and for
the Perusal of the Inhabitants of
Ireland, for maintaining the Poor, to
prevent Beggars, and to shew that
each Parish might keep them well, and
be Gainers by their Work.*

I. **A**N Act should be passed to oblige every parish to maintain their own poor, this should be done by a tax or poor cess levied and raised from and in each separate parish, for that purpose. The power of raising such tax or taxes, and expending or laying out the money arising therefrom, should be vested in two substantial house-keepers, living and residing in the parish; these officers to be called the overseers of the poor; said officers
to



to be chosen by a vestry held by the parson of the parish and inhabitants thereof; said vestry to be called, and the overseers chosen every Easter Monday in the parish church, at which place the old officers or overseers should have their books examined, and delivered to their succeeding officers, together with any surplus money that might remain in their hands; but if they should have advanced any money, the new officers should pay them, and reimburse themselves when the ensuing tax was gathered, and in order that the officers should have something for their trouble, they should be allowed six-pence in the pound sterling, for every pound so gathered, laid out, and expended; but as the parish would take it turn about, the labour, or loss and gain would be less material.

II. We will suppose the said act to take place, and overseers to be chosen at Easter, upon which said overseers

Scheme for maintaining the Poor. 231

feers should go round the parish, and make a strict inquiry, how many poor it contained, as also how many stolling beggars were abroad that belonged to said parish; we will suppose the number found, to be eighteen; by this, it will be easy to form a judgment what tax to raise to answer the following scheme.

III. These officers should proceed to take or rent for the said eighteen poor people's use, thirteen acres and a half of land, being four and a half for every six persons (or so in proportion) that might happen to be in the said parish. It is also allowed by calculation, that these four acres and half will maintain six in family, provided it be managed properly, and laid out in the following method, that is to say, an acre and half to graze a milch cow, one ditto for corn, one do. for flax, one ditto for hay and potatoes, which for eighteen persons, and rented at 25s. per

per acre, will make £. 16 17 6
 on which build cabbins
 such as cotters generally
 do, which may be done
 for 20s. for every six in fa-
 mily; (indeed most land-
 lords only allow from five
 to ten shillings for build-
 ing a cotter's cabin) but
 if we allow 20s. for every
 six persons, the above eigh-
 teen will be 3 0 0

To three milch cows for the
 three families, six in each,
 at 4l. each cow, but it is
 supposed the cows will last
 several years, therefore the
 first would be the hardest,
 for the next year when the
 cows were dry, they might
 be changed for springers at
 about 20s. boot each cow 12 0 0

To three fat cows for hang
 beef at 4l. each 12 0 0

To three fat hogs at 20s. each 3 0 0

£. 46 17 6

Scheme for maintaining the Poor. 233

Brought over - - -	£. 46	17	6
To cloaths for eighteen persons, at 30s. per year each	27	0	0
To flax-feed for three acres of land, at three bushels each acre, and at 8s. per bushel - - -	3	12	0
To ploughing the corn and flax land - - -	3	0	0
To seed oats for three acres	1	2	6
To seed potatoes for an acre and half - - -	1	10	0
To schooling for any children that might not be able to work, suppose three to every six in family	1	10	0
To a man and his wife as master and mistress of the three united families or eighteen persons	15	0	0

Note, It would be proper for the master to be a weaver, and to have looms to weave as much of their yarn as he could, and also be obliged

H h

£. 99 12 0

Brought over £. 99 12 0

to teach one of his poor children that trade; the master and mistress to be under subjection to the overseers; the man's care should be over the land and out of door business, and by the way of a bailiff to keep the poor at work and in regular order; the woman to mind the house, and teach the females to card, spin, knit, and such like, every one to their proper work as their age and sex requires.

To necessaries for the three united families, one year with another - - - 5 0 0

£. 104 12 0

We find the above 104l. 12s. quite sufficient to maintain eighteen poor people.

Now,

Scheme for maintaining the Poor. 235

Now, suppose there be six persons out of every eighteen (or so in proportion) not able to work. Quære, whether the remaining be sufficient to manage the ground, and spin the three acres of flax into yarn, or as much of it as will pay the above expence? This I take upon myself to make clear, and also upon a moderate computation to find the value of three acres of flax thus spun and sold as in the following table.

To 60 bushels of seed, 20 on each acre at 8s. per bushel	24	0	0
To 180 stones scutched flax, 60 on each acre when hackled to 8d. a pound tare, will produce 1080 pounds, 900 pounds spun to two dozen and half in the lb. and sold at 6d. per dozen	56	5	0
To 1260 lb. tow, 460 when spun into yarn worth 8d. per lb.	-	-	-
	15	6	8
	<hr/>		
	£.	95	11 8

Brought over - -	£. 95	11	8
To 110 pounds of flax fold			
unspun at 8d. per pound	6	0	0
To 800 pounds of tow, fold			
unspun at 4d. per pound	13	6	8
	<hr/>		
	£	114	18 4

It is without doubt, that three acres of flax will make, at a moderate calculation, as above 114l. 18s 4d. so that the expence of the eighteen poor subtracted, leaves a profit of 10l. 6s. 4d. to the parish for chance of sickness and burials, &c. &c. The profit would still be greater were they to have looms, and manufacture the cloth thoroughly. If they should be old men, &c. that could not be able to work out of doors, they might pull oacum, &c. And when the overseers found themselves strong in cash (as without doubt they would if proper œconomy was used) they should give it in small premiums amongst the poor families, in order to encourage industry; this would be like giving the best wages to the best servants.

As

Scheme for maintaining the Poor. 237

As to any cities, such as Dublin, Cork, &c. each parish might take houses of low rent in by places, and convert them into work-houses, and instead of sowing flax, they might buy it to spin, and sell the yarn; as also buy old ropes for the men to make oacum of.

But I would advise the overseers of such cities to go eight or ten miles into the country, and take land in proportion for any number of poor they might have; by this, their living would come cheap, and they would always have flax enough at the first hand, which would leave the greater profit; and if it was eight or ten miles from the city, it would be no great matter for overseers to go, week about, to see that their master and mistress kept proper regulations in their poor families.

Every parish should put a badge on the breast of each of their poor, made of brass, about the size of a crown piece, and the name of the parish they belong to stamped thereon, and any one that strayed out of their own parish
with-

without a furlow from the minister thereof, should be immediately taken up and sent to goal, untill the parish they belonged to had notice to bring them home, which parish should pay all their expences.

No servant should gain a settlement without serving one master one whole year; in such case, his settlement should be in the parish of his last year's servitude, provided his master belonged to the said parish.

A servant woman should gain a settlement in the same manner; but if she marry, then she goes to her husband's settlement.

If a single woman be got with-child, it is the business of the overseers of the parish she then resides in, to inquire if she belonged to said parish; if not, to remove her to the parish she belongs to. The overseers of such parish must take her to the next justice of the peace to examine her upon oath, who is the father of the child. If she will not swear or confess, then it lyeth at the mid-

Scheme for maintaining the Poor. 239

mid-wife's door before she delivers her, upon which the overseer takes the man by force, with a warrant, and obliges him either to marry the woman, or give security to maintain the child, or go to goal; if the last be his choice, then the parish the woman belongs to, must maintain the woman in her lying-in, and the child, until the man is brought to reason.

If any vagrant beggar, or passenger, be detected asking alms, it is the business of the overseers to take them to a justice of peace, to examine upon oath the parish they belong to, which being found out, the justice must grant a pass from overseer to overseer until they come to their own parish, and that parish to pay all their travelling expences; but the overseers must take them either on horseback, or some carriage, maintain them on the road, and not to part with them out of custody, until they are delivered up to the parish they belong to.

Note,

Note, The overseers of one parish are not to go past the overseers of the next.

No one to gain a settlement in any parish but such as had lived in, and payed church, king, or poor-cess in said parish.

An apprentice should have his settlement in the parish he served the last thirty one days of his time, always provided, that the master belonged by settlement to the said parish.

It is the business of the overseers of the poor to make the public money go as far as they can, but not to let the poor want.

In short, for the year being, they are the fathers of the poor, and the stewards of the public.

It is necessary that one of them at least, should be a scholar: it is common to chuse a scholar and an illiterate person together.

When a poor man, &c. wants work, or is sick, lame, &c. so that he cannot maintain his family, he is to apply to
the

Scheme for maintaining the Poor. 241

the overseers of his parish, and if they do not relieve his wants, he may go to a justice of the peace, and make his complaints known upon oath; the said justice being thoroughly apprized of his necessities, can oblige their parish to take care of him.

By the foregoing table it plainly appears, that the parish would be no losers at the end of the year, when they come to sell the yarn, flax, tow, &c. therefore need not raise any tax, after the first year, but let that be a standing capital.

It is also as plain to any one that understands calculation of flax, yarn, labour, land, &c. that the table I have laid down may be reasonably expected upon a moderate calculation, to answer. But if it should be high (as it is not) we have room, as the surplus or profit to the parish over and above mentioning the said eighteen poor is 10l. 6s. 4d.

I allow 180 pounds of scutched flax, and 800 pounds of tow, to be sold unspun, as I would not press the

I i

spin-

spinners too close, tho' I have a good reason to believe they would be able to spin the whole, particularly if there should chance to be more women than men, and I believe this would be generally the case.

If we find by calculation, that each parish will produce eighteen poor, the number in Ireln^d will amount to 41274, and if every eighteen cost 104l. 12s. the amount of the whole cost will be 239733l. 3s. A charge impossible to be supported by all the public funds in Ireland, and were magnificent poor-houses to be built for them, as is too much practised already, the sinking fund would be immensely great, besides a poor person that has lived in a snug warm smoaky cabbⁿ all his life, until he is taken up into one of these magnificent buildings, it is like throwing pearls before swine, (if we may use the expression.) In short it is taking them quite out of their own elements, where I am certain, if they had meat and cloaths sufficient, they would sleep,
work,

work, be as healthy, and live as long, as they would in the finest house in the kingdom.

Another heavy charge on these great houses, is a long chain of officers with large salaries.

Perhaps I may be answered, that the poor might be kept at labour and an advantage made of their work in one of these great work-houses. This I grant, but never with that propriety and advantage as it would be, by each parish maintaining their own poor, for in this case, it would behove every inhabitant of the parish to see that there was proper regularity and decorum kept, and that they were employed to the best advantage; and as the overseers would be chosen yearly, it would be with them, as it is with the Lord Mayor, every one striving to excel his predecessors.

Likewise the parish-poor would have the land at the cheapest hand, to raise their provisions and flax on by their own labour, therefore would have
the

the advantage of above three to one, of those who had them to buy at the dearest hand, were every other article upon an equal footing, which it is not.

But suppose we could be so happy as to say, that there are work-houses enough built, and a fund sufficient to maintain all the poor in the kingdom, and the said poor put into them this very day, I doubt not but in six months, I should see as many beggars as ever, strolling about the country; at the most I would not desire above a year or two to stock all the high-roads and streets, &c. in Ireland.

Whereas on the other hand, if the above scheme was to take place, it would put a final stop to strolling beggars, and in short, many pilfering robbers too, which beg by day, and rob by night. It would behove every parish to keep their poor at home, knowing if they strolled abroad, they would have them to fetch home at their own expence; and if they did not keep up
to

to these regularities, the law would oblige them to do it, as without doubt, it would be put into execution, for it would be very natural for one parish to say to another, we maintain our poor, therefore we expect you to do the like; for we will not be pestered or pilfered by them. These are consequences which I have a right by experience to know, as I am a native of England, and have paid a great many poor cesses and other taxes there, as also have served most of the parish offices.

It is well known, that England is a well governed people, the poor thereof, by nature and wholesome laws, are an honest and industrious useful body, however, they are a heavy charge upon the landed interest, tho' the weight thereof is chiefly owing to the parishioners themselves, who are, it is true, a plain, honest well-meaning people, but so much attached to their old customs, that they would rather be losers than try a change.

It

It is the custom there, when a poor family is reduced and in necessity, or when work is scarce, so that a man having a wife and half a dozen children, and that he or they cannot get work sufficient to maintain themselves, they apply to the overseers of the poor, and they will perhaps allow them ten or twelve shillings in the week. Now if they were to copy after the above plan, and had work-houses to receive them upon such occasions, they would be sure of a sufficient livelihood, and at the same time would be earning it.

In Yorkshire, Lincolnshire, Lancashire and Cheshire, within these few years, some parishes have taken houses of low rents at the end of a town, and converted them into work-houses for the reception of the poor, and finds them with meat, drink, cloaths enough, and work of different sorts, according to their age, sex, and abilities. By this frugal regularity, I have heard overseers say, that they have reduced their poor cess from ten-pence to

to two-pence in the pound; and I am confident, were they to copy after the foregoing plan, they might reduce it to nothing.

Parkgate and Neston parish are well known to most of the Irish gentry, as it lies in the road to London. By the introduction of some sensible penetrating residents in said parish, they have of late fixed a work-house at the end of Neston, at a low rent, wherein they employ their poor, some in spinning, some in winding perns, others picking oacum, &c. &c. according to their age and sex. In said work-house they have a loom, and he that takes care of the poor, as master, is by trade a weaver, and weaves their yarn.

By this œconomy, the poor-cess of Neston, is reduced to a trifle to what it formerly was, and the poor thereof are made useful members of society.

If this act and plan was to take place, what a pleasure it must give every human mind, to think that every person in his parish was freed from hun-

hunger and cold, as without doubt they would, having an asylum to fly to.

On the other hand, what christian can sleep in peace, tho' he be fed with corn and wine (as the phrase is) cloathed in the softest raiment, and lying upon a bed of down, as long as he knows his fellow-creatures made up of the same materials of soul and body, and who have the same sense of pain and pleasure, are starving for want of the common necessaries of life.

I apprehend no one need stretch his mind to the Indies, or ransack the desarts of Arabia, in finding out miserable objects, to thank his maker for being so much happier and better in this life than they. Let him turn his mind on his own parishioners, perhaps his next door neighbour, and there he will find misery in as full perfection as in those savage countries.

T H E

T H E

UTILITY *and* EXPLANATION of
a MACHINE, invented by the
Author hereof.

TH E perfection of this machine will evidently appear, when it is proved, that it is both a saving of seed, and wrought with little expence. This was my intention when I first set myself about it. Any thing loses its value if the expence over-balance the utility, let the invention be ever so ingenious.

What merit is it for a gentleman to say, that he has improved his lands to a great pitch, when perhaps they have cost near as much as the purchase is worth.

This machine is also very useful for harrowing moss from the roots of grass, in meadow or pasture land.

K k

When



When it is used for harrowing moss, the hopper and machinery are taken off, and nothing appears but the harrow, the frame of which is supported by three wheels, every three or four pins as may appear by the cut, rise and fall, and gives way to a hill or stone, without disturbing any other part of the harrow. There is a sufficient room or passage for clods, or stones to traverse between the pins, tho' they are so fixed as to cut within two inches and a half of each other; the foremost row of pins is the largest.

This machine will sow any sort of corn, or any quantity on an acre, from sixteen pounds upwards; and it can be made to sow either in drills at any distance, or in the broad-cast way.

The roller A, may occasionally be put in the place of the wheel B, which follows the harrow.

1, 2, 3, 4, 5, 6, are the frame (supported by the three wheels) which the work stands upon; as 7 are all alike into which go gudgeons which give the
the

the pins liberty to play up and down. 8 is an iron axeltree on which is fixed a cog-wheel that turns the wheel 9, and the said 9 turns the multiplying wheel 10, on which multiplying wheel are two flies fixed, 11 and 12, these flies strike against the bottom of the hoppers 13, 14, which raise up the three hoppers, (being all in one piece) and lets them fall upon 15, 16, 17, this shakes the corn out. 18, 19, are standards which 20, 21, are fixed upon, with a pin to alter higher or lower, 22, is a spread board, which is fastened to the hopper with hinges. On the spread board are nailed four laths which go up to the mouth of each hopper 23, 24, 25, the hoppers discharge thro' a passage of one inch broad, but the front board 26, which goes before the mouth or front of all the three hoppers, can be raised, or lowered from the thickness of a grain of wheat, to six or seven inches high; this is done by the two slopes at each end of the front board,

board, which lies on a shoulder in 27, 28. 29, 30, are standards in which are pulleys, to which pulleys are fixed a strap of white leather, which is fastened to the hopper 31, 32.

The three hooks at the fore part of the machine are to fix two horses, of a breast, the two inside traces hang upon the middle hook.

The whole work is laid down with a scale of one inch to a foot.



I N D E X



I N D E X.

Chap. I.	Book II.	
D	DIRECTIONS how to manage	
	white flax	Page 2
ii	On seed-flax	14
iii	On black or bunch-rate flax	18
iv	On dew-rate flax	22
v	On breaking and fwingling flax	25
vi	On flax-feed	28
vii	On French flax-feed sieves	39
viii	On hemp	41
ix	On wheat	46
x	On barley	52
xi	On oats	55
xii	On beans and pease	61
xiii	On buck-wheat	64
xiv	On rape and cole-feed	67
xv	On turnips	82
xvi	On potatoes set with the plough	94
xvii	On vetches	99
xviii	On clover	102
xix	On lalucerne	106
xx	On saintfoin	115
xxi	On ray-grass	119
xxii	On reclaiming bog and mountain	125
		Book



I N D E X.

Chap.	Book II.	Page
i	Remarks on flax	133
ii	Remarks on seed-flax	138
iii	Remarks on bog and mountain	146
iv	Remarks on agriculture in general	151
v	Remarks on burn-baiting	165
vi	Remarks on clover	171
vii	Remarks on setting potatoes with the plough	173
viii	Remarks on the folly of burning stubble	176
ix	On pickles for wheat	178
x	On ploughing with one man and two horses	180
xi	On burnet	184
	Calendar for January	187
	February	190
	March	192
	April	197
	May	199
	June	203
	July	205
	August	207
	September	209
	October	211
		No-

I N D E X.

November	214
December	216
A receipt to kill red worms	217
On manures	219
Explanation of names	226
Scheme for maintaining the poor.	230
Explanation of the machine	249

E R R A T A.

Page 47 line 21 for shread read spread.

P. 72 l. 25 for reap read rape.

P. 99 and 100 for fitches read vetches.

22. 1. 13.



INDEX

November 214
December 216
A receipt to kill red worms 217
On manners 219
Explanation of names 226
Scheme for maintaining the poor 230
Explanation of the machine 249

ERRATA

Page 47 line 21 for thread read spread.
P. 72 l. 25 for reap read rape.
P. 99 and 100 for fitches read vetches.

